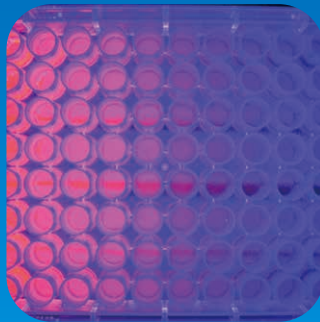
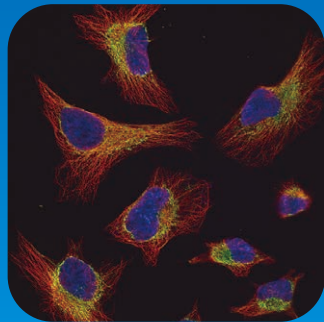
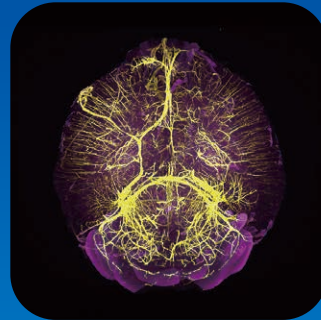
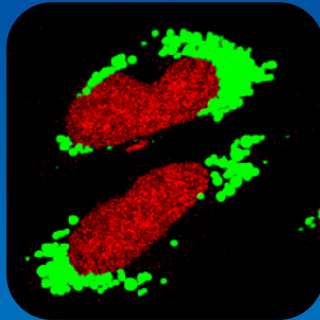
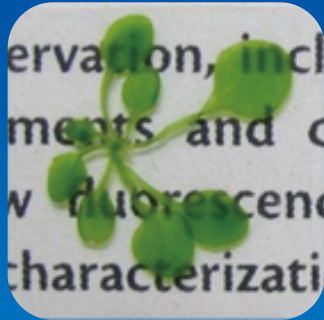


Reagents for Biological Research



Reagents for Biological Research

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Fluorescent Labeling Dyes

Boron Dipyrromethenes

Green fluorescence

Can be used to label amino groups.

BDP FL 5mg / 25mg [D5554]

BDP FL NHS Ester 5mg / 25mg [D5555]

Reference

K. Kitamura, H. Itoh, K. Sakurai, S. Dan, M. Inoue, *J. Am. Chem. Soc.* **2018**, *140*, 12189.

Benzofrazans

Green-yellow fluorescence ($\lambda_{\text{ex, max}} = \text{ca. } 470 \text{ nm}$, $\lambda_{\text{em, max}} = \text{ca. } 530 \text{ nm}$)

A5592 and **A5593** can be used to label amino groups or thiol groups.

NBD-Cl 1g / 5g [A5592]

NBD-F 100mg [A5593]

A5594 can be used to label carboxyl groups by amide bond formation using a coupling agent.

NBD-PZ 100mg [A5554]

Yellow fluorescence ($\lambda_{\text{ex, max}} = \text{ca. } 380 \text{ nm}$, $\lambda_{\text{em, max}} = \text{ca. } 510 \text{ nm}$)

A5595 can be used to label amino groups or thiol groups.

DBD-F 100mg [A5595]

A5574 and **A5555** can be used to label carboxyl groups by amide bond formation using a coupling agent.

DBD-ED 100mg [A5574]

DBD-PZ 100mg [A5555]

S0503 can be used to label amino groups due to the active *N*-hydroxysuccinimide group.

Succinimidyl 6-[[7-(*N,N*-Dimethylaminosulfonyl)-2,1,3-benzoxadiazol-4-yl]amino]hexanoate

100mg [S0503]

References

K. Imai, *Yakugaku Zasshi* **2003**, *123*, 901.

S. Uchiyama, T. Santa, N. Okiyama, T. Fukushima, K. Imai, *Biomed. Chromatogr.* **2001**, *15*, 295.

T. Kurihara *et al.*, *J. Biol. Chem.* **2012**, *287*, 24113.

B. Xu *et al.*, *Langmuir* **2013**, *29*, 15191.

Coumarins

Blue fluorescence ($\lambda_{\text{ex, max}} = 342 \text{ nm}$, $\lambda_{\text{em, max}} = 447 \text{ nm}$ in pH4 buffer)

Can be used to label amino groups. Fluorescent spectra depend on pH.

7-Hydroxycoumarin-3-carboxylic Acid

200mg / 1g [H1352]

7-Hydroxycoumarin-3-carboxylic Acid

***N*-Succinimidyl Ester** 200mg / 1g [S0866]

Blue fluorescence ($\lambda_{\text{ex, max}} = 360 \text{ nm}$, $\lambda_{\text{em, max}} = 410 \text{ nm}$ in pH7 buffer)

Can be used to label amino groups. Fluorescent spectra do not depend on pH.

7-Methoxycoumarin-3-carboxylic Acid

100mg / 1g [M2233]

7-Methoxycoumarin-3-carboxylic Acid

***N*-Succinimidyl Ester** 100mg / 1g [S0867]

References

O. S. Wolfbeis, E. Koller, P. Hognmuth, *Bull. Chem. Soc. Jpn.* **1985**, *58*, 731.

Y. C. Lee *et al.*, *J. Biol. Chem.* **2000**, *35*, 26772.

Dansyls

Green-yellow fluorescence ($\lambda_{\text{ex, max}} = \text{ca. } 335 \text{ nm}$, $\lambda_{\text{em, max}} = \text{ca. } 460 \text{ nm}$, dependent on the environment)

D0656 can be used to label amino groups by sulfonamide bond formation.

Dansyl Chloride 1g / 5g / 25g [D0656]

A5552 can be used to label carbonyl groups by hydrazone bond formation.

Dansyl Hydrazine 1g / 5g [A5552]

A5354 can be used to label amino groups by thiourea bond formation.

Dansylamino-PITC 100mg [A5354]

References

T. Hiratsuka, *Tanpakushitsu Kakusan Koso (Protein, Nucleic Acid and Enzyme)*, **1997**, *42*, 1069.

B. K.-K. Fung, L. Stryer, *Biochemistry* **1978**, *17*, 5241.

V. R. N. Munasinghe *et al.*, *Bioconjugate Chem.* **2007**, *18*, 231.

S. Siricilla, K. Mitachi, K. Skorupinska-Tudek, E. Swiezewska, M. Kurosu, *Anal. Biochem.* **2014**, *461*, 36.

Fluoresceins

Green fluorescence ($\lambda_{\text{ex, max}}=494 \text{ nm}$, $\lambda_{\text{em, max}}=521 \text{ nm}$)

F0026, **F0783** and **F0784** can be used to label amino groups or thiol groups.¹⁾

Fluorescein 5-Isothiocyanate (isomer I) (=5-FITC) 100mg / 1g [**F0026**]

Fluorescein 6-Isothiocyanate (isomer II) (=6-FITC) 100mg [**F0783**]

Fluorescein Isothiocyanate (mixture of 5- and 6- isomers) 100mg / 1g [**F0784**]

C2477 and **C2478** can be used to label amino groups by amide bond formation using a coupling agent.²⁾

5-Carboxyfluorescein (=5-FAM) 100mg / 1g [**C2477**]

6-Carboxyfluorescein (=6-FAM) 100mg [**C2478**]

C2479 can be used to label amino groups without a coupling agent due to the active *N*-hydroxysuccinimide group.³⁾

5-Carboxyfluorescein *N*-Succinimidyl Ester 20mg / 100mg [**C2479**]

F0810 can be used to label thiol groups due to the maleimide group.⁴⁾

Fluorescein-5-maleimide 1g / 5g [**A0306**]

A0306 and **A0864** can be used to label carboxyl groups by amide bond formation using a coupling agent.⁵⁾

5-Aminofluorescein (isomer I) 25mg [**F0810**]

6-Aminofluorescein (isomer II) 1g / 5g [**A0864**]

F1222 can be used to label azido groups via click reaction.⁶⁾

5-FAM-Alkyne 25mg [**F1222**]

References 1) H. Rinderknecht, *Nature* **1962**, 193, 167.

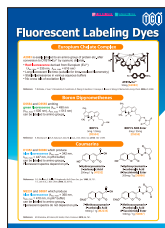
2) S. Onoue, B. Liu, Y. Nemoto, M. Hirose, T. Yajima, *Anal. Sci.* **2006**, 22, 1531.

3) P. Breeuwer, J. Drocourt, F. M. Rombouts, T. Abee, *Appl. Environ. Microbiol.* **1996**, 62, 178.

4) T. Cihlar, E. S. Ho, *Anal. Biochem.* **2000**, 283, 49.

5) W. B. Dandliker, A. N. Hicks, S. A. Levison, R. J. Brawn, *Biochem. Biophys. Res. Commun.* **1977**, 74, 538.

6) W. M. Rink, F. Thomas, *Org. Lett.* **2018**, 20, 7493.



Other fluorescent labeling dyes are also available. For more information, please refer to the product category page on our website or the product brochure "Fluorescent Labeling Dyes".

TCl fluorescent labeling dyes



Europium Fluorescent Labeling Reagent

ATBTA-Eu³⁺ is a europium chelate complex and can be used as a fluorescent labeling reagent. ATBTA-Eu³⁺ is easily labeled to protein etc. after conversion to DTBTA-Eu³⁺ by Cyanuric Chloride.

Advantages

Long fluorescent life time ($\tau = 1.02\text{ms}^*$)

For time-resolved fluorometry

Stable fluorescence in various aqueous buffers

Available in Tris, TE PBS, etc. for wide use

No cross talk of excitation light

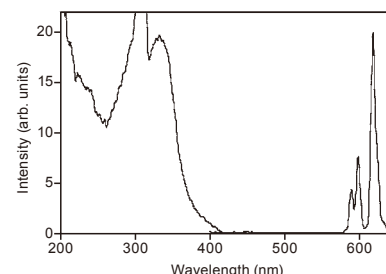
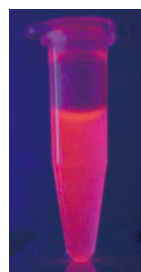
• $\lambda_{\text{ex, max}} = 335 \text{ nm}^*$

• $\lambda_{\text{em, max}} = 616 \text{ nm}^*$

Sharpened emission spectrum

Large Stokes shift (the difference in wavelength between positions of the band maxima of the absorption and emission spectra)

*Data as DTBTA- Eu³⁺



ATBTA-Eu³⁺

10mg [A2083]

Cyanuric Chloride

25g / 500g [C0460]

Related Products

Anti-DTBTA-Eu³⁺ Rabbit Antiserum (Preservative : 0.1% NaN₃)

0.5mL [A2181]

Anti-DTBTA-Eu³⁺ Rabbit Polyclonal Antibody [2.5mg/mL in PBS(-)] (Preservative : 0.1% NaN₃)

0.5mL [A2239]

Streptavidin DTBTA-Eu³⁺ Conjugate

0.1mg/vial [S0993]

Goat Anti-Mouse IgG DTBTA-Eu³⁺ Conjugate

0.1mg/vial [G0505]

Goat Anti-Rabbit IgG DTBTA-Eu³⁺ Conjugate

0.1mg/vial [G0506]

Fluorescent Organosilica Particles for Labeling

Advantages

• Wavelength : $\lambda_{\text{ex, max}} = 492 \text{ nm}$, $\lambda_{\text{em, max}} = 523 \text{ nm}$ (O0561)

$\lambda_{\text{ex, max}} = 556 \text{ nm}$, $\lambda_{\text{em, max}} = 579 \text{ nm}$ (O0573)

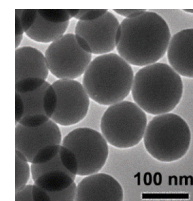
• Surface Functionalization : Thiol group (-SH)

• Superior in fluorescence intensity to the conventional FITC or rhodamine B.

• The diameter of this product is 100 nm and this product is suitable for the detection of biomolecules.



O0561
Fluorescent
image



SEM image

Organosilica FITC (100nm Diam.)

2mg [O0561]

Organosilica Rhodamine B (100nm Diam.)

2mg [O0573]

O0561 and O0573 were developed by Prof. Michihiro Nakamura.

References 1) M. Nakamura, *et al.*, *ACS Nano* **2015**, 9, 1058.

2) M. Nakamura, *et al.*, *Colloids Surf. B Biointerfaces* **2010**, 79, 19.

Near-infrared Fluorescent Dyes

Indocyanine Green (= ICG)

100mg / 1g [I0535]

IR 754 Carboxylic Acid

1g / 5g [C3693]

ICG Carboxylic Acid

1g / 5g [O0574]

IR 775 Chloride

1g / 5g [I1026]

IR 783

200mg / 5g [I1031]

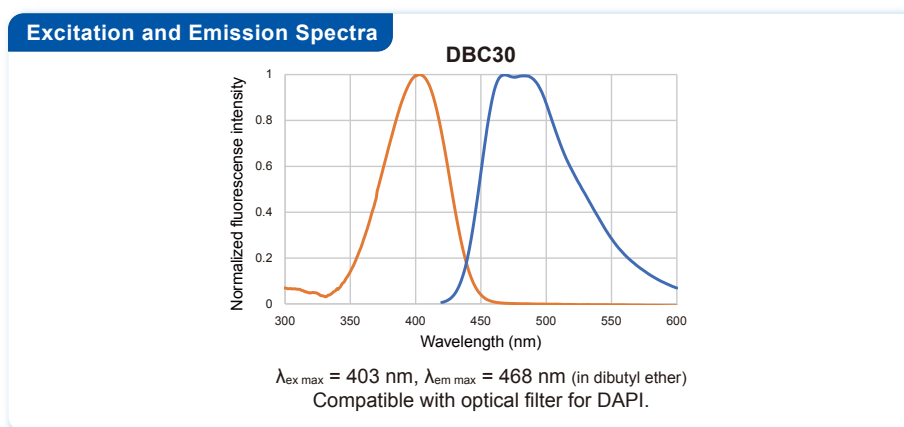
Fluorescent Imaging Reagent for Lipid Droplet: DBC30

Advantages

- Stains lipid droplets in both cells and tissues clearly and distinctly due to the high fluorescence intensity.
- Can be used in combination with multiple fluorescent dyes due to the high lipid droplet selectivity and intracellular retention.

DBC30 (2mg/mL in Dimethyl Sulfoxide) [for Biochemical Research]

0.1mL [D6131]



D6131 was developed by Dr. Toshitada Yoshihara.

Reference K. Purevsuren *et al.*, *J. Photochem. Photobiol. A* **2023**, 438, 114562.

Fluorescent Probe for Lipid Droplet Imaging: ShoyakuGreen

Advantages

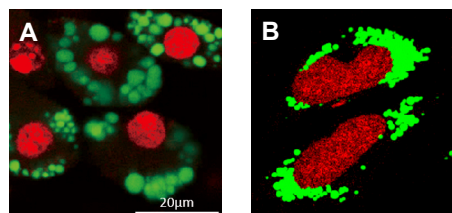
- Maximum excitation wavelength at 404 nm,
Maximum emission wavelength at 473 nm (in *n*-hexane)
- Strong and specific fluorescence imaging of lipid droplets
- Low cytotoxicity

ShoyakuGreen (= TFMAQ-8Ph)

2mg [T3935]

T3935 are commercialized under instruction of Prof. Satoru Karasawa, Dr. Yasufumi Fuchi, and Dr. Koichi Hamada.

Reference Y. Fuchi, K. Hamada, S. Karasawa, *et al.*, *Sci. Rep.* **2019**, 9, 17723.



(Observation via Leica TCS SP5)

(A) Add the differentiation reagent to the medium of 3T3-L1 cells and culture for 10 days.

(B) Add oleic acid to the medium of HeLa cells and culture for 48 hours.

Fluorescent Nucleic Acid Stains

Acridine Orange Solution [for Cell Staining]

Basic Orange 14

Bisbenzimidazole H 33258 Hydrate

Bisbenzimidazole H 33258 (1mg/mL in Water) (0.2mL×5)

DAPI 2HCl

DAPI 2HCl (1mg/mL in Water) (0.2mL×5)

Ethidium Bromide

Ethidium Bromide (0.5mg/mL in Water) (in Dropper Bottle) [for Electrophoresis]

5mL [A3396]

25g [A0132]

25mg [H1343]

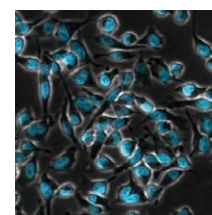
1set [B6236]

5mg [A2412]

1set [D5888]

1g / 5g [E0370]

10mL [E1363]



Chemiluminescence Reagents

Cypridina Luciferin Analogs

CLA	10mg [A5307]
MCLA	10mg [A5309]
Red-CLA	1mg [A5311]

Firefly Luciferin

D-(-)-Luciferin	10mg / 50mg [A5030]
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Luminols

Luminol	1g / 25g [A5301]
Isoluminol	1g / 10g [A5300]
ABEI	100mg / 1g [A5304]

Oxalates

TCPO	1g / 5g [A5302]
Bis[3,4,6-trichloro-2-(pentyloxycarbonyl)phenyl] Oxalate	5g / 25g [O0236]
DNPO	1g / 5g [A5303]
PFPO	1g [A5305]

Acridinium Salts

Lucigenin	1g / 5g [B1203]
MMT	100mg / 1g [B4339]

Chemiluminescence Enhancers

Sodium Perborate Tetrahydrate	25g / 500g [S0887]	4-(2-Methyl-4-thiazolyl)phenol	100mg / 1g [M2325]
4-Bromophenol	1g / 5g [B3910]	4-(4,5-Diphenyl-1H-imidazol-2-yl)phenol	
4-Iodophenol	1g / 5g [I0840]		100mg [D4178]

Chemiluminescence Reagent for the Detection of Intramitochondrial Superoxide

MMT [B4339] is a specific probe having lucigenin-like chemiluminescence to superoxide among reactive oxygen species. Since amphiphilic MMT which is less hydrophilic than lucigenin possesses cell-permeability, MMT has been applicable for the detection of intramitochondrial superoxide production.

MMT [= 10,10'-Dimethyl-9,9'-biacridinium Bis(monomethyl Terephthalate)]

100mg / 1g [B4339]

Application

Figure shows the localization of MMT in mitochondria.

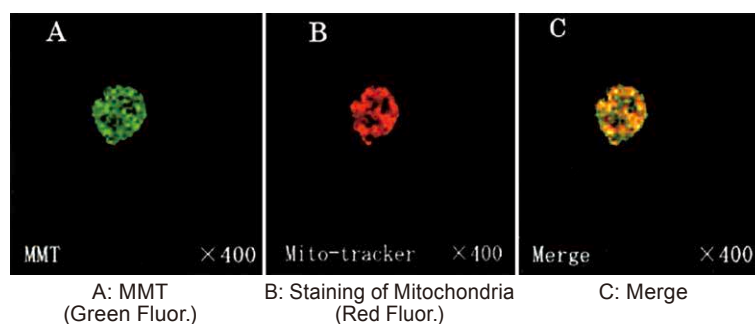


Figure. Fluorescence in mitochondria in mouse peritoneal neutrophils. (Provided by Prof. Kobayashi)
Reference S. Sasaki, S. Yamada, M. Iwamura, Y. Kobayashi, *Free Radic. Biol. Med.* **2013**, 65, 1005.

Animal Tissue-Clearing Reagents

Advantages

- Basic protocol

Clearing of whole mouse bodies as well as animal organs can be achieved by using two reagents in sequence: **CUBIC-L [T3740]** for delipidation and either **CUBIC-R+(N) [T3983]** or **CUBIC-R+(M) [T3741]** for RI matching.

The difference between CUBIC-R+(N) [T3983] and CUBIC-R+(M) [T3741]:

CUBIC-R+(N) is inexpensive and easier to handle because it raises less precipitation.

The fluorescence signal may decay, but the fluorescence signals of samples in CUBIC-R+(N) can be observed for several days after immersion. CUBIC-R+(M) is superior in retaining the fluorescence signal. However, at low temperatures such as in winter, it may precipitate. In that case, it can be resolved by placing the sample at 37°C for a few days.

For these reasons, it is recommended to try CUBIC-R+(N) first and then use CUBIC-R+(M) if fluorescence signal cannot be found.

CUBIC trial kit (including mounting solution)

1kit [C3942]

This all-in-one kit includes CUBIC-L 50mL, CUBIC-R+(M) 50mL, and Mounting Solution (RI 1.520) 50mL.

CUBIC-L (for delipidation and decoloring)

25mL / 100mL / 500mL [T3740]

CUBIC-R+(N) (for RI matching)

25mL / 100mL / 500mL [T3983]

CUBIC-R+(M) (for RI matching)

25mL / 100mL [T3741]

CUBIC-B (for decalcification)

25mL / 100mL [T3780]

CUBIC-HL (for delipidation strongly and quenching autofluorescence)

25mL / 100mL [T3781]

CUBIC-P (with perfusion before tissue excision)

25mL / 100mL [T3782]

CUBIC-X1 (for expansion)

25mL / 100mL [T3866]

CUBIC-X2 (for RI matching with expansion)

25mL / 100mL [T3867]

CUBIC-HV™1 3D immunostaining kit (Casein separately)

1kit [C3717]

This kit contains buffers and anti-NeuN antibody (positive control) for 3D immunostaining of CUBIC-cleared tissues.

CUBIC-HV™1 3D nuclear staining kit

1kit [C3709]

This kit contains buffers and typical nuclear stains for 3D nuclear staining of CUBIC-cleared tissues.

Related Products

Mounting Solution (RI = 1.520) [for CUBIC-R+]

50mL [M3294]

Mounting Solution (RI = 1.467) [for CUBIC-X2]

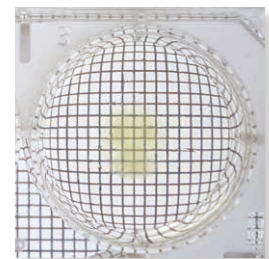
50mL [M3292]

Mouse Anti-NeuN Monoclonal Antibody

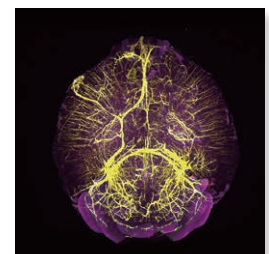
0.1mg/vial [M3586]

Goat Anti-Mouse IgG1 Fab Fragment Cyanine 3 Conjugate

0.05mg/vial [G0598]



Whole-brain clearing



Whole-body clearing with nuclei staining and immunostaining

CUBIC reagents were developed by Prof. Hiroki R. Ueda and are commercialized under invention licenses by RIKEN, Japan. CUBIC-HV™ is a registered trademark of CUBICStars Co.

If you want to get Technical Guidebook,

TCI CUBIC Guidebook



If you want to see Q&A,

TCI CUBIC Q&A



Plants Tissue-Clearing Reagents

For observing fluorescent protein clearly without complicated procedures

Advantages

- Enables transparency by simple osmosis in just a few days (more than 2 days).
- Keeps the fluorescence of a fluorescent protein such as GFP or tdTomato co-expressed as a reporter gene.
- Suppresses autofluorescence.
- Applicable to wide plant species including *Oryza sativa*, *Arabidopsis thaliana*, *Marchantia polymorpha*.

Decoloring solution

Tissue-Clearing Reagent iTOMEI-D [for Plants]

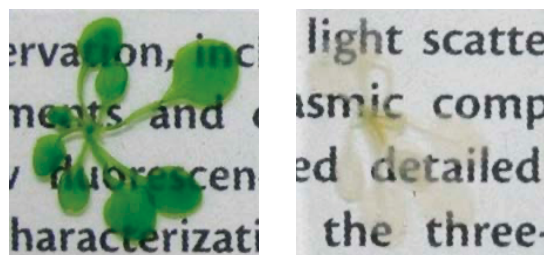
5mL / 25mL [T3940]

Mounting solution

Tissue-Clearing Reagent iTOMEI-M (RI 1.40) [for Plants]

5mL / 25mL [T4003]

Improved TOMEI (iTOMEI) developed by Prof. Sakamoto *et al.* is a method that specializes TOMEI⁽¹⁾ for fluorescent protein observation. This method enables simply transparency and clearly detecting fluorescent protein.^(2,3,4) TCI offers suitable reagents for iTOMEI.



- References
- 1) J. Hasegawa, Y. Sakamoto, S. Nakagami, M. Aida, S. Sawa, S. Matsunaga, *Plant Cell Physiol.* **2016**, 57, 462.
 - 2) Y. Sakamoto, S. Matsunaga, *et al.*, *Commun. Biol.* **2022**, 5, 12.
 - 3) M. Sato, Y. Sakamoto, S. Matsunaga, H. Tsuji, *et al.*, *Int. J. Mol. Sci.* **2022**, 23, 40.
 - 4) Y. Sakamoto, S. Matsunaga, Tokyo University of Science, Jpn. Kokai Tokkyo Koho 2020-026975, **2020**.

Biofilm-Clearing Reagents

Advantages

- Can make biofilm transparent by simply adding iCBiofilm.
- Suitable for various kinds of biofilm.
- Cleared biofilm can be observed by light-sheet fluorescent microscopy (LSFM) or confocal laser-scanning microscopy (CLSM).

Clearing Reagent iCBiofilm-H1 [for Biofilm]

8mL [T4031]

Clearing Reagent iCBiofilm-H2 [for Biofilm]

8mL [T4032]

T4031 and T4032 are commercialized under instruction of Assoc. Prof. Shinya Sugimoto.

Anti-Glycolipid Antibodies

Anti-GM₁ Monoclonal Antibody	Isotype: Mouse IgM	0.1mg/vial	[A2505]
Anti-GM₂ Monoclonal Antibody	Isotype: Mouse IgM	0.1mg/vial	[A2576]
Anti-GM₃ Monoclonal Antibody	Isotype: Mouse IgM	0.1mg/vial	[A2582]
Anti-GD_{1a} Monoclonal Antibody	Isotype: Mouse IgM	0.1mg/vial	[A2507]
Anti-GD_{1b} Monoclonal Antibody	Isotype: Mouse IgG3	0.1mg/vial	[A2508]
Anti-GD₂ Monoclonal Antibody	Isotype: Mouse IgM	0.1mg/vial	[A3338]
Anti-GD₃ Monoclonal Antibody	Isotype: Mouse IgM	0.1mg/vial	[A2580]
Anti-GT_{1a} Monoclonal Antibody	Isotype: Mouse IgM	0.1mg/vial	[A2702]
Anti-GT_{1b} Monoclonal Antibody	Isotype: Mouse IgM	0.1mg/vial	[A2732]
Anti-GQ_{1b} Monoclonal Antibody	Isotype: Mouse IgM	0.1mg/vial	[A2662]
Anti-GalNAc-GD_{1a} Monoclonal Antibody	Isotype: Mouse IgM	0.1mg/vial	[A2701]
Anti-Gb₃ Monoclonal Antibody	Isotype: Mouse IgG2b	0.1mg/vial	[A2506]
Anti-Gb₃ Monoclonal Antibody Biotin Conjugate	Isotype: Mouse IgG2b	0.1mg/vial	[A2822]
Anti-SGPG (HNK-1) Monoclonal Antibody	Isotype: Mouse IgG2a	0.1mg/vial	[A2706]

Anti-Sulfated Glycan Antibodies

Anti-6-sulfo LacNAc Monoclonal Antibody (AG105)	Isotype: Mouse IgM	0.1mg/vial	[A3251]
Anti-6,6'-disulfo LacNAc Monoclonal Antibody (L4L4-8)	Isotype: Mouse IgM	0.1mg/vial	[A3252]
Anti-Sialyl 6,6'-disulfo LacNAc Monoclonal Antibody (G270-16)	Isotype: Mouse IgM	0.1mg/vial	[A3253]
Anti-Sialyl 6-sulfo Lewis X Monoclonal Antibody (G152)	Isotype: Mouse IgM	0.1mg/vial	[A3399]

Anti-Glycosaminoglycan Antibodies

Anti-Chondroitin Sulfate A Monoclonal Antibody (LY111)	Isotype: Mouse IgM	0.1mg/vial	[A3143]
Anti-Chondroitin Sulfate D Monoclonal Antibody (MO-225)	Isotype: Mouse IgM	0.1mg/vial	[A2872]
Anti-Keratan Sulfate Monoclonal Antibody(R-10G)	Isotype: Mouse IgG1	0.1mg/vial	[A2968]
Anti-Perlecan Monoclonal Antibody (HK-102)	Isotype: Rat IgG2a	0.1mg/vial	[A3342]

Anti-Blood Group Antigen Antibodies

Anti-Lewis X Monoclonal Antibody	Isotype: Mouse IgM	0.1mg/vial	[A2578]
Anti-Lewis Y Monoclonal Antibody	Isotype: Mouse IgG3	0.1mg/vial	[A2510]
Anti-Sialyl Lewis A Monoclonal Antibody (1H4)	Isotype: Mouse IgG3	0.1mg/vial	[A2584]
Anti-Sialyl Lewis A Monoclonal Antibody (2D3)	Isotype: Mouse IgM	0.1mg/vial	[A2509]
Anti-Sialyl Lewis X Monoclonal Antibody	Isotype: Mouse IgM	0.1mg/vial	[A2849]

Antigen Sugar-conjugated Proteins

HSA-Gb₃	0.1mg/vial	[H1718]
HSA-Gb₅	0.1mg/vial	[H1777]
HSA-Lewis	0.1mg/vial	[H1719]
HSA-Sialyl Lewis X	0.1mg/vial	[H1730]
HSA-GM₁ Pentasaccharide	0.1mg/vial	[H1767]
HSA-Globo-H	0.1mg/vial	[H1794]
HSA-L1-L1	0.1mg/vial	[H1782]

Anti-NeuGc Polyclonal Antibodies

Anti-NeuGc Polyclonal Antibody	0.05mg/vial	[A3240]
Anti-NeuGc Polyclonal Antibody Biotin Conjugate	0.05mg/vial	[A3294]
Anti-NeuGc Polyclonal Antibody FITC Conjugate	0.05mg/vial	[A3295]
Anti-NeuGc Polyclonal Antibody R-PE Conjugate	0.05mg/vial	[A3360]
Anti-NeuGc Polyclonal Antibody HRP Conjugate	0.05mg/vial	[A3397]

Anti-αGal Polyclonal Antibodies

Anti-αGal Polyclonal Antibody (Chicken)	0.05mg/vial	[A3123]
Anti-αGal Polyclonal Antibody Biotin Conjugate	0.05mg/vial	[A3144]
Anti-αGal Chicken Polyclonal Antibody HRP Conjugate	0.05mg/vial	[A3195]
Anti-αGal Polyclonal Antibody FITC Conjugate	0.05mg/vial	[A3337]
Anti-αGal Polyclonal Antibody R-PE Conjugate	0.05mg/vial	[A3354]

Anti-Protein A Antibodies

Anti-Protein A Chicken Polyclonal Antibody	0.1mg/vial	[A3044]
Anti-Protein A Chicken Polyclonal Antibody Biotin Conjugate	0.05mg/vial	[A3045]
Anti-Protein A Chicken Polyclonal Antibody HRP Conjugate	0.05mg/vial	[A3187]

Anti-Tag Antibodies

Anti-DYKDDDDK Antibodies

Mouse Anti-DYKDDDDK Monoclonal Antibody	0.1mg/vial	[M3389]
Mouse Anti-DYKDDDDK Monoclonal Antibody Biotin Conjugate	0.05mg/vial	[M3400]

Anti-HHHHHH (6xHis) Antibodies

Anti-6xHis Monoclonal Antibody (6A12)	0.1mg/vial	[A2957]
Immunogen: HHHHHH (6xHis); Isotype: Mouse IgG1		
Anti-6xHis Monoclonal Antibody (6A12) Biotin Conjugate	0.05mg/vial	[A3010]
Anti-6xHis Monoclonal Antibody (6A12) HRP Conjugate	0.05mg/vial	[A3075]

Anti-Glutathione S-Transferase (GST) Antibodies

Anti-GST Monoclonal Antibody	0.1mg/vial	[A3175]
Immunogen: Glutathione S-transferase (GST); Isotype: Mouse IgG2a		
Anti-GST Monoclonal Antibody Biotin Conjugate	0.05mg/vial	[A3226]

Anti-Endo-M Antibodies

Anti-Endo-M Polyclonal Antibody	0.2mg/vial	[A2958]
Immunogen: <i>endo-β-N-Acetylglucosaminidase (Endo-M)</i> ; Isotype: Rabbit IgG		
Anti-Endo-M Polyclonal Antibody Biotin Conjugate	0.1mg/vial	[A2959]

Enzymes that Transfer the Intact Oligosaccharides

<i>endo-β-N-Acetylglucosaminidase (=Endo-M)</i>		
Recombinant: from <i>Mucor hiemalis</i> expressed in <i>Candida boidinii</i>		
	100munits/vial	[A1651]

Glycosynthase (Endo-M-N175Q)

Recombinant: from <i>Mucor hiemalis</i> expressed in <i>Escherichia coli</i>		
	100munits/vial	[G0365]

Endo-M-W251N

Recombinant: from <i>Mucor hiemalis</i> expressed in <i>Escherichia coli</i>		
	500munits/vial	[E1339]

Anti-DTBTA-Eu³⁺ Antibodies

Anti-DTBTA-Eu³⁺ Rabbit Polyclonal Antibody	0.5mL [A2239]
Anti-DTBTA-Eu³⁺ Rabbit Antiserum	0.5mL [A2181]

Anti-Influenza Virus Antibodies

Anti-Influenza A Virus Neuraminidase N1 Monoclonal Antibody Immunogen: Influenza A/Brijing/262/95; Clone name: 2-3B; Isotype: Mouse IgG1	0.2mL [A2407]
Anti-Influenza A Virus Hemagglutinin H3 Monoclonal Antibody Immunogen: Influenza A/Sydney/5/97; Clone name: 1G8; Isotype: Mouse IgG3	0.2mL [I0079]
Anti-Influenza A Virus Neuraminidase N2 Monoclonal Antibody Immunogen: Influenza A/Sydney/5/97; Clone name: 1-4B; Isotype: Mouse IgG1	0.2mL [A2380]
Anti-Influenza A Virus Nucleoprotein Monoclonal Antibody Immunogen: Influenza A/Beijing/262/95; Clone name: 17; Isotype: Mouse IgG2a	0.2mL [A2406]

Secondary Antibodies and Other Antibodies

Anti-Mouse IgG

Goat Anti-Mouse IgG	1mg/vial [G0386]
Goat Anti-Mouse IgG Biotin Conjugate	0.1mg/vial [G0387]
Goat Anti-Mouse IgG HRP Conjugate	0.1mg/vial [G0407]
Goat Anti-Mouse IgG FITC Conjugate	0.1mg/vial [G0406]
Goat Anti-Mouse IgG DTBTA-Eu³⁺ Conjugate	0.1mg/vial [G0505]
Goat Anti-Mouse IgG₁ Fab Fragment Cyanine 3 Conjugate	0.05mg/vial [G0598]
Goat Anti-Mouse IgG R-PE Conjugate	0.1mg/vial [G0569]

Anti-Mouse IgM

Goat Anti-Mouse IgM	1mg/vial [G0408]
Goat Anti-Mouse IgM Biotin Conjugate	0.1mg/vial [G0432]
Goat Anti-Mouse IgM HRP Conjugate	0.1mg/vial [G0417]
Goat Anti-Mouse IgM FITC Conjugate	0.1mg/vial [G0453]

Anti-Rabbit IgG

Goat Anti-Rabbit IgG	1mg/vial [G0388]
Goat Anti-Rabbit IgG Biotin Conjugate	0.1mg/vial [G0597]
Goat Anti-Rabbit IgG HRP Conjugate	0.1mg/vial [G0418]
Goat Anti-Rabbit IgG DTBTA-Eu³⁺ Conjugate	0.1mg/vial [G0506]
Goat Anti-Rabbit IgG FITC Conjugate	0.1mg/vial [G0452]
Goat Anti-Rabbit IgG R-PE Conjugate	0.1mg/vial [G0577]

Anti-Chicken IgY

Sheep Anti-Chicken IgY	1mg/vial [S0998]
Sheep Anti-Chicken IgY Biotin Conjugate	0.1mg/vial [H1619]
Sheep Anti-Chicken IgY HRP Conjugate	0.1mg/vial [S0999]

Anti-HRP Antibody

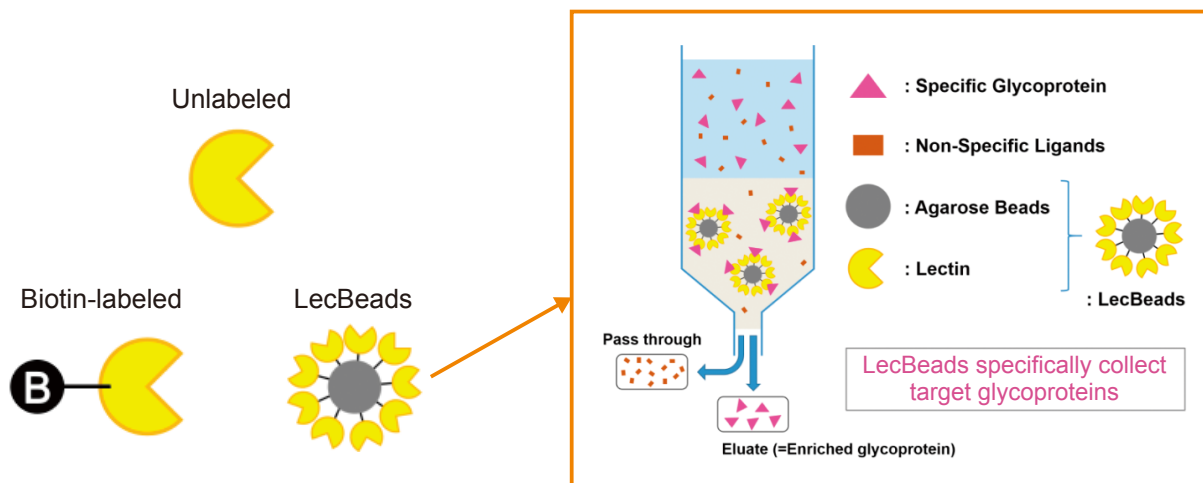
Anti-HRP Rabbit Polyclonal Antibody	0.2mL [A2250]
Immunogen: Horseradish Peroxidase; Isotype: Rabbit IgG	

Anti-Human IgG

Anti-Human IgG Fc C-terminus Monoclonal Antibody	0.1mg/vial [A3277]
Immunogen: Synthetic peptide corresponding to human IgG Fc C terminus; Isotype: MouseIgG1	
Mouse Anti-Human IgG Fc	0.1mg/vial [M2977]
Mouse Anti-Human IgG Fc Biotin Conjugate	0.1mg/vial [M3053]

Recombinant Lectins

- High purity recombinant lectins produced by genetic recombination technology
- Diverse lineup corresponding to various glycans



Lectin (abbr.)	Linkage Classification		Product Number		
	Hapten Sugar (Monosaccharide)	Specificity	Unlabeled	Biotin-labeled	LecBeads
PSL1a	Sialic Acid	Sia α (2-6)Gal	R0225	R0230	R0235
LSLN	Galactose	Gal β (1-4)GlcNAc/poly LacNAc	R0226	R0231	R0236
MOA	Galactose	Gal α (1-3)Gal	R0227	R0232	R0237
SRL	GlcNAc	GlcNAc β (1-2)Man/Gal β (1-3)GalNAc	R0228	R0233	R0238
GRFT	Mannose	Man α (1-2)Man	R0229	R0234	R0239
AOL	L-Fucose	Fuca(1-6)/ α (1-4)/ α (1-3)/ α (1-2)	L0169	A2659	A3331

R0225, R0226, R0227, R0228, R0229 are commercialized under license from National Institute of Advanced Industrial Science and Technology (AIST), Japan. L0169 is merchandized under the technical tie-up with GEKKEIKAN SAKE COMPANY, LTD. R0225, R0226, R0227, R0228, R0229 were developed in collaboration with National Institute of Advanced Industrial Science and Technology (AIST), Japan.

Recombinant *Polyporus squamosus* lectin (= rPSL1a) expressed in *Escherichia coli* 1mL [R0225]

Recombinant *Laetiporus sulphureus* lectin N-Terminal Domain (= rLSL-N) expressed in *Escherichia coli* 1mL [R0226]

Recombinant *Marasmius oreades* agglutinin (= rMOA) expressed in *Escherichia coli* 1mL [R0227]

Recombinant *Sclerotium rolfii* lectin (= rSRL) expressed in *Escherichia coli* 1mL [R0228]

Recombinant *Griffithsia* sp. lectin (= rGRFT) expressed in *Escherichia coli* 1mL [R0229]

Lectin, Fucose specific (= AOL) from *Aspergillus oryzae* (5mg/mL, PBS pH6.5) 1mL [L0169]

rPSL1a-Biotin [for Sia α (2-6)Gal] 1mL [R0230]

rLSL-N-Biotin [for Gal β (1-4)GlcNAc, poly LacNAc] 1mL [R0231]

rMOA-Biotin [for Gal α (1-3)Gal] 1mL [R0232]

rSRL-Biotin [for GlcNAc β (1-2)Man, Gal β (1-3)GalNAc] 1mL [R0233]

rGRFT-Biotin [for Man α (1-2)Man] 1mL [R0234]

AOL-Biotin Conjugate 1mL [A2659]

rPSL1a-LecBeads [for Sia α (2-6)Gal] 1vial [R0235]

rLSL-N-LecBeads [for Gal β (1-4)GlcNAc, poly LacNAc] 1vial [R0236]

rMOA-LecBeads [for Gal α (1-3)Gal] 1vial [R0237]

rSRL-LecBeads [for GlcNAc β (1-2)Man, Gal β (1-3)GalNAc] 1vial [R0238]

rGRFT-LecBeads [for Man α (1-2)Man] 1vial [R0239]

AOL-LecBeads [for Fuca(1-6)/ α (1-4)/ α (1-3)/ α (1-2)] 1vial [A3331]

Protein A

Protein A Recombinant, expressed in <i>Escherichia coli</i>	5mg/vial [P2366]
Protein A Biotin Conjugate	1mg/vial [P2407]
Protein A HRP Conjugate	0.2mg/vial [P2466]
Protein A Agarose	2mL/vial [P2461]

Protein G

Protein G Recombinant, expressed in <i>Escherichia coli</i>	1mg/vial [P2808]
Protein G Biotin Conjugate	0.2mg/vial [P2959]
Protein G HRP Conjugate	0.2mg/vial [P2962]

Protein L

Protein L Biotin Conjugate	0.2mg/vial [P2998]
Protein L HRP Conjugate	0.2mg/vial [P2999]
Protein L Recombinant, expressed in <i>Escherichia coli</i>	1mg/vial [P3059]

Streptavidins

Streptavidin from <i>Streptomyces avidinii</i>	1mg/vial [S0972]
Streptavidin HRP Conjugate	0.1mg/vial [S0966]
Streptavidin DTBTA-Eu ³⁺ Conjugate	0.1mg/vial [S0993]
Streptavidin R-PE Conjugate	0.1mg/vial [T3885]
Streptavidin Maleimide Conjugate	0.5mg/vial [T3531]

Biotinylation Reagents

For Amino Groups

Biotin	100mg / 1g / 5g [B0463]
N-Succinimidyl D-Biotinate	100mg / 1g [S0491]
Biotin Pentafluorophenyl Ester	50mg / 250mg [B3173]
(+)-Biotin 4-Nitrophenyl Ester	200mg [B4009]
6-Biotinamidohexanoic Acid	100mg [B2433]
N-Succinimidyl 6-Biotinamidohexanoate	20mg / 100mg [S0490]
Biotin-PEG3-acetic Acid	50mg [B5711]
Biotin-PEG4-propionic Acid	50mg / 250mg [B5562]
Biotin-LC-LC	100mg / 500mg [B6207]
Biotin-PEG2-NHS	25mg / 100mg [S0955]
Biotin-LC-LC-NHS	25mg / 100mg [S0956]

For Thiol Groups

N-[2-(2-Pyridyldithio)ethyl]biotinamide	10mg / 50mg [P2471]
Biotin-HPDP	25mg / 100mg [B5749]
Maleimide-PEG2-Biotin	50mg [B3174]
Biotin-PEG6-Maleimide	10mg / 50mg [B5563]

Biotinylation Reagents

For Aldehyde, Carbonyl Groups

Biotin Hydrazide	25mg / 100mg	[B2431]
Biotin-LC-Hydrazide	25mg / 100mg	[H1071]
Biotin-PEG2-Hydrazide	10mg / 50mg	[B5577]
Biotin-PEG4-Hydrazide	10mg / 50mg	[B5578]

For Carboxyl Groups

N-(2-Aminoethyl)biotinamide	50mg / 250mg	[A3131]
Biotin-C₅-Amine	25mg / 100mg	[A3155]
Biotin-PEG2-Amine	25mg / 100mg	[B3171]
Biotin-PEG3-Amine	25mg / 100mg	[B3172]
Biotin-PEG4-Amine	10mg / 50mg	[B5560]
Biotin-PEG11-Amine	10mg / 50mg	[B5565]

For Click Reactions

Biotin-Azide	100mg	[A2524]
Biotin-PEG3-Azide	100mg	[A2523]
Biotin-PEG4-Azide	100mg	[B5546]

For Other

N^α-Fmoc-N^ε-biotinyl-L-lysine	200mg / 1g	[F1042]
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Desthiobiotinylation Reagents

Hydrazide-PEG4-Desthiobiotin	25mg	[H1667]
Azide-PEG3-Desthiobiotin	10mg	[A3202]

Pre-Weighed Biotinylation Reagents

For Amino Groups

Biotin-LC-LC-NHS (2mg×5)	1set	[B6096]
Biotin-PEG2-NHS (2mg×5)	1set	[B6097]

For Click Reactions

Biotin-Azide (2mg×5)	1set	[A3420]
Biotin-PEG3-Azide (2mg×5)	1set	[B6265]
Biotin-PEG4-Azide (2mg×5)	1set	[B6266]

Hydrolases

Acylase from Hog Kidney	100mg / 500mg	[A0148]
α-Amylase diluted with Starch, from <i>Bacillus amyloliquefaciens</i>	25g / 500g	[A0447]
β-Amylase from Soybean	25g	[A0448]
Acylase from <i>Aspergillus</i> genus	25g	[A0688]
endo-β-N-Acetylglucosaminidase (=Endo-M) Recombinant: from <i>Mucor hiemalis</i> expressed in <i>Candida boidinii</i> (100m units/vial)	1vial	[A1651]
endo-α-N-Acetylgalactosaminidase (=Endo-α) Recombinant: from <i>Bifidobacterium longum</i> expressed in <i>Escherichia coli</i>	1vial	[A1844]
Lipase coated with 1-Butyl-2,3-dimethylimidazolium Polyethylene Glycol Hexadecyl Ether Sulfate	1g	[B3028]
Cellulase from <i>Aspergillus niger</i>	1g / 5g / 25g	[C0057]
α-Chymotrypsin from Bovine Pancreas (3× recrystallized, salt free from 20% Ethanol, presence of Calcium enhances its activity and stability)	100mg	[C0342]
Cephalosporinase from <i>Bacillus</i> (1000000unit/vial)	1vial	[C0893]
Cephalosporinase from <i>Bacillus</i> (10000unit/vial)	1vial	[C1238]
Diastase from <i>Aspergillus oryzae</i>	25g	[D1115]
Deoxyribonuclease I from Bovine Pancreas	100mg	[D5564]
Endo-M-W251N Recombinant: from <i>Mucor hiemalis</i> expressed in <i>Escherichia coli</i> (500m units/vial)	1vial	[E1339]
Ficin	25g	[F0010]

Glycosynthase (Endo-M-N175Q) Recombinant: from <i>Mucor hiemalis</i> expressed in <i>Escherichia coli</i> (100m units/vial)	1vial	[G0365]
Hyaluronidase from Bovine Testes	100mg	[H0164]
Keratanase II from <i>Bacillus circulans</i>, Recombinant	1vial	[K0069]
Lipase from Porcine Pancreas	25g	[L0057]
Lysozyme	5g / 25g	[L0423]
Glucosylase from <i>Rhizopus</i> (contains 50% Diatomaceous earth)	25g	[M0035]
Pectinase from <i>Aspergillus niger</i>	25g / 100g	[P0026]
Pepsin from Porcine Stomach	25g	[P0103]
Phosphatase, Acid from Wheat Germ	100mg	[P0251]
Penicillinase (1mL will inactivate 120000 units of Penicillin) (contains 0.25% phenol as preservative substance)	25mL	[P0310]
Protease from <i>Aspergillus oryzae</i>	25g	[P0538]
Pancreatin from Porcine Pancreas	25g / 100g	[P0636]
Penicillinase (=Penicillin amido-β-lactamhydrolase, from <i>Bacillus cereus</i>, Lyophilized powder (2500000unit/vial)	1vial	[P0913]
Penicillinase (=Penicillin amido-β-lactamhydrolase, from <i>Bacillus cereus</i>, Lyophilized powder (5000000unit/vial)	1vial	[P1259]
Papain from Carica Papaya (contains 60% Maltose)	25g	[P2936]
Rennin	25g	[R0005]
Trypsin from Porcine Pancreas	1g	[T4068]
Urease from Jack Bean	100mg / 1g	[U0017]

Oxidoreductases

Alcohol-dehydrogenase from Yeast [for Blood alcohol-test]	10mg [A0200]	Peroxidase from Horseradish	100mg [P0073]
Catalase from Bovine Liver	1g [C0052]	Horseradish Peroxidase NHS Ester Conjugate (0.2mg×3)	1set [H1746]
Glucose Oxidase from <i>Aspergillus niger</i>	1g [G0050]	Horseradish Peroxidase Maleimide Conjugate (0.5mg×3)	1set [H1621]
Lipoxidase from Soybean	100mg [L0059]	Protein A HRP Conjugate	0.2mg/vial [P2466]

Substrates for Alkaline Phosphatase

Ready-to-use Substrate Solution

4-Nitrophenyl Phosphate (Ready-to-use solution) [for ELISA] (= pNPP (Ready-to-use solution))	100mL [N1109]
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Soluble Substrates

4-Nitrophenyl Phosphate Disodium Salt Hexahydrate (= pNPP)	1g / 5g [D4005]
4-Nitrophenyl Phosphate Di(tris) Salt	5g [N0422]
1-Naphthylphosphoric Acid Monosodium Salt Monohydrate	1g / 5g / 25g [N0452]
1-Naphthylphosphoric Acid Disodium Salt Hydrate	1g / 5g [P0263]

Precipitate Substrates

For such as immunohistochemical staining or immunoblotting, substrates arising precipitate dyes with alkaline phosphatase.

Fast Blue RR Salt	5g / 25g [B0785]
X-Phosphate p-Toluidine Salt	100mg / 1g [B1239]
Blue Tetrazolium	1g / 5g [B3581]
Naphthol AS-TR Phosphate	200mg [C2250]
Nitro Blue Tetrazolium (= NBT)	100mg / 1g [D0844]
Iodonitrotetrazolium Chloride (= INT)	100mg / 1g [I0781]
Tetranitro Blue Tetrazolium (= TNBT)	100mg / 1g [T0250]

Substrates for Peroxidase

Ready-to-use solution

TMB (= 3,3',5,5'-Tetramethylbenzidine) (Ready-to-use solution) [for ELISA]	100mL [T3854]
TMB (= 3,3',5,5'-Tetramethylbenzidine) (Ready-to-use solution) [for Western blotting]	100mL [T3855]
4-CN (= 4-Chloro-1-naphthol) (Ready-to-use solution) [for Western blotting]	100mL [C3384]
AzBTS (= 2,2'-Azinobis(3-ethylbenzothiazoline-6-sulfonic Acid Ammonium Salt))(Ready-to-use solution) [for ELISA]	100mL [A3176]
DAB staining kit	1kit [D5909]

Soluble Substrates (for ELISA etc.)

For such as ELISA, substrates generating soluble dyes with peroxidase.

AzBTS (= 2,2'-Azinobis(3-ethylbenzothiazoline-6-sulfonic Acid Ammonium Salt))	1g [A2166]
OPD·2HCl (= 1,2-Phenylenediamine Dihydrochloride)	1g [P1144]
OPD (= 1,2-Phenylenediamine)	1g / 5g [P1805]
TMB (= 3,3',5,5'-Tetramethylbenzidine)	1g / 5g [T2573]

Soluble Substrates (for determining H₂O₂)

Substrates generating soluble dyes for determining hydrogen peroxidase (H₂O₂) by various enzyme reactions.

4-AA·2HCl (= 4-Aminoantipyrine Hydrochloride)	5g / 25g [A0257]
4-AA (= 4-Aminoantipyrine)	1g / 5g [A2254]
5-ASA (= 5-Aminosalicylic Acid) * ¹	5g / 25g [A2291]
DCHBS (= 3,5-Dichloro-2-hydroxybenzenesulfonic Acid Sodium Salt) * ¹	25g [D1928]
2,4-DCP (= 2,4-Dichlorophenol) * ¹	1g / 5g [D3865]
DMA (= <i>N,N</i> -Dimethylaniline) * ¹	1g / 5g [D3866]
DMT (= <i>N,N</i> -Diethyl- <i>m</i> -toluidine) * ¹	1g / 5g [D3868]
TOOS (= Sodium 3-[Ethyl(<i>m</i> -tolyl)amino]-2-hydroxy-1-propanesulfonate) * ¹	1g / 5g [S0805]
ALPS (= Sodium 3-(<i>N</i> -Ethylanilino)propanesulfonate) * ¹	200mg / 1g [S0817]
ADOS (= Sodium 3-(<i>N</i> -Ethyl-3-methoxyanilino)-2-hydroxy-1-propanesulfonate) * ¹	200mg / 1g [S0826]
HDAOS (= <i>N</i> -(2-Hydroxy-3-sulfopropyl)-3,5-dimethoxyaniline Sodium Salte) * ¹	200mg [S0827]
MBTH·HCl (= 3-Methyl-2-benzothiazolinonehydrazone Hydrochloride)	1g / 5g [M2155]

*¹ : Used together with [A2254](#) (or [A0257](#))

Precipitate Substrates

For such as immunohistochemical staining or immunoblotting, substrates arising precipitate products with peroxidase.

AEC (= 3-Amino-9-ethylcarbazole)	1g / 5g [A2167]
4-CN (= 4-Chloro-1-naphthol)	1g / 5g [C2291]
DAB (= 3,3'-Diaminobenzidine)	1g / 5g [D3756]
DAB·4HCl (= 3,3'-Diaminobenzidine Tetrahydrochloride Hydrate)	1g / 5g [D3757]
o-Dianisidine * ²	1g / 5g [D3864]
o-Dianisidine Dihydrochloride * ²	1g / 5g [D3893]
DMPD·2HCl (= <i>N,N</i> -Dimethyl-1,4-phenylenediamine Dihydrochloride) * ³	1g / 5g [D3931]
1-Naphthol * ³	1g / 5g [N0864]

*² : By combining **N0864** and **D3931** *³ : Used together with **C2291**

Related Products

Sodium Hydroxide (1mol/L in Water)	500mL [S0542]
Hydrochloric Acid (1mol/L)	500mL [H1202]
Peroxidase from Horseradish	100mg / 1g [P0073]
Horseradish Peroxidase Maleimide Conjugate (0.5mg×3)	1set [H1621]
Horseradish Peroxidase NHS Ester Conjugate (0.2mg×3)	1set [H1746]
Anti-6xHis Monoclonal Antibody (6A12) HRP Conjugate	0.05mg/vial [A3075]
Anti-Protein A Chicken Polyclonal Antibody HRP Conjugate	0.05mg/vial [A3187]
Anti-αGal Chicken Polyclonal Antibody HRP Conjugate	0.05mg/vial [A3195]
Anti-NeuGc Polyclonal Antibody HRP Conjugate	0.05mg/vial [A3397]
Goat Anti-Mouse IgG HRP Conjugate	0.1mg/vial [G0407]
Goat Anti-Mouse IgM HRP Conjugate	0.1mg/vial [G0417]
Goat Anti-Rabbit IgG HRP Conjugate	0.1mg/vial [G0418]
Sheep Anti-Chicken IgY HRP Conjugate	0.1mg/vial [S0099]
Protein A HRP Conjugate	0.2mg/vial [P2466]
Streptavidin HRP Conjugate	0.1mg/vial [S0972]

Substrates for β-Galactosidase

Generating Insoluble Dyes

X-Gal (= 5-Bromo-4-chloro-3-indolyl β-D-Galactopyranoside) ■ Blue	200mg / 1g [B3201]
Magenta-Gal (= 5-Bromo-6-chloro-3-indolyl β-D-Galactopyranoside) ■ Purplish red	20mg / 100mg [B3469]
Bluo-Gal (= 5-Bromo-3-indolyl β-D-Galactopyranoside) ■ Deep blue	20mg / 100mg [B3470]
Salmon-Gal (= 6-Chloro-3-indolyl β-D-Galactopyranoside) ■ Light purplish red	20mg / 100mg [C2371]

Generating Soluble Dyes

ONPG (= 2-Nitrophenyl β -D-Galactopyranoside) ■ Yellow	1g / 5g / 25g [N0418]
PNPG (= 4-Nitrophenyl β -D-Galactopyranoside) ■ Yellow	1g / 5g [N0616]

Substrates for β -Glucuronidase

X-Gluc CHA Salt (= 5-Bromo-4-chloro-3-indolyl β -D-Glucuronide Cyclohexylammonium Salt) ■ Blue	10mg / 100mg [B3620]
X-Gluc Sodium Salt (= 5-Bromo-4-chloro-3-indolyl β -D-Glucuronide Sodium Salt) ■ Blue	10mg / 100mg [B3621]

Substrates for Luciferase

D-(-)-Luciferin	10mg / 50mg [A5030]
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Enzyme Inhibitors

Alkaline Phosphatase Inhibitors

Disodium β-Glycerophosphate Pentahydrate 1g / 5g [D3964]	Levamisole Hydrochloride Tetramisole Hydrochloride	1g / 5g [L0231] 10g [T3663]
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Protease Inhibitors

AEBSF	100mg / 1g [A2215]	2-Iodoacetamide	5g [I0741]
Benzamidine Hydrochloride	5g [B3379]	1,10-Phenanthroline Monohydrate	5g [P1826]
Benzylsulfonyl Fluoride	5g / 25g [B3473]	100\timesProtease Inhibitor Cocktail (EDTA free)	1vial [P2949]
EDTA 3Na Hydrate	5g / 25g [T2599]	100\timesProtease Inhibitor Cocktail	1vial [P2976]
EDTA 2Na Dihydrate	5g / 25g [D3789]	Ubenimex Hydrochloride	25mg [B4000]
EGTA	5g / 25g [E0805]		
E-64d	5mg / 25mg [E1337]		

Other enzyme inhibitors are also available. For more information, please visit the Product Categories page of our website.



Protease Inhibitor Cocktail

Advantages

- Can be used as a 100× stock solution by dissolving in 1 mL of deionized water.
- Protects protein samples from proteolysis by various proteases.
- **P2949** does not contain EDTA, making it compatible with metal chelate affinity chromatography.

100×Protease Inhibitor Cocktail (EDTA free)

1 vial [P2949]

100×Protease Inhibitor Cocktail

1 vial [P2976]

Components

Protease Inhibitor	Target Protease(s)	P2949	P2976
AEBSF	Serine protease	○	○
Aprotinin	Serine protease, Esterase	○	○
EDTA	Metalloprotease		○
E-64	Cysteine protease	○	○
Leupeptin	Cysteine protease, Trypsin-like protease	○	○

Enzymes for Enzymatic Synthesis

Endo-M

endo-β-N-Acetylglucosaminidase (=Endo-M)

Recombinant: from *Mucor hiemalis* expressed in *Candida boidinii* (100m units/vial)

1 vial [A1651]

Endo-M-W251N Recombinant: from *Mucor hiemalis* expressed in *Escherichia coli* (500m units/vial)

1 vial [E1339]

Glycosynthase (Endo-M-N175Q) Recombinant: from *Mucor hiemalis* expressed in *Escherichia coli*

(100m units/vial)

1 vial [G0365]

Glyco-substrates for Endo-M

N^ω-(2-Acetamido-2-deoxy-β-D-glucopyranosyl)-N^α-Boc-L-asparagine

100mg [A1614]

2-Azidoethyl 2-Acetamido-2-deoxy-β-D-glucopyranoside

500mg [A2172]

DNS-SGN

1mg [D3690]

Disialyloctasaccharide

10mg [D4065]

N-GlcNAc-Biotin

50mg [G0297]

G2-peptide

5mg [G0466]

G0 Glycan

Contact us. [G0484]

3-G1 Glycan

Contact us. [G0485]

6-G1 Glycan

Contact us. [G0486]

G2 Glycan

1mg [G0487]

Galα(1-3) N-Glycan

Contact us. [G0488]

SGN

1mg [G0560]

Galα(1-3) core 6-Fucosylated N-Glycan

Contact us. [G0574]

M3-biotin

Contact us. [M2985]

MANT-M3GN2-DNP

1mg [M3174]

Neu5Aca(2-6)Galβ(1-3)GlcNAc-β-pNP

1mg [N0855]

4-Nitrophenyl 2-Acetamido-2-deoxy-β-D-glucopyranoside

1mg / 200mg [N0866]

Disialylnonasaccharide-β-pNP

1mg [N0913]

Neu5Gca(2-6) N-Glycan

Contact us. [N1064]

Nonasaccharide-β-pNP

1mg [N1211]

Sialylglycopeptide

10mg [S0523]

Endo-α

endo-α-N-Acetylgalactosaminidase (=Endo-α)

Recombinant: from *Bifidobacterium longum* expressed in *Escherichia coli*

1 vial [A1844]

Glyco-substrates for Endo-α

Galβ(1-3)GalNAc-α-Thr

5mg [G0340]

Galβ(1-3)GalNAc-α-pNP

5mg [G0375]

Galacto-N-biose

Contact us. [G0439]

Endoglycoceramidases (EGCases)

rEGCase I	1vial [R0240]
rEGCase I assisted by Activator II	1vial [R0241]
rEGCase II	1vial [R0242]
rEGCase II assisted by Activator II	1vial [R0243]

Other Glycohydases

α-Amylase diluted with Starch, from <i>Bacillus amyloliquefaciens</i>	25g / 500g [A0447]
β-Amylase from Soybean	25g [A0448]
Cellulase from <i>Aspergillus niger</i>	1g / 5g / 25g [C0057]
Glucose Oxidase from <i>Aspergillus niger</i>	1g [G0050]
Hyaluronidase from Bovine Testes	100mg [H0164]
Keratanase II from <i>Bacillus circulans</i> , Recombinant	1vial [K0069]
Lysozyme	5g / 25g [L0423]
Glucoamylase from <i>Rhizopus</i> (contains 50% Diatomaceous earth)	25g [M0035]
Pectinase from <i>Aspergillus niger</i>	25g / 100g [P0026]

Glyco-substrates for Enzyme

Amylopectin (Amylose free) , from Waxy Corn	25g / 500g [A0456]
Acarbose	1g / 5g [A2485]
5-Bromo-4-chloro-3-indolyl β-D-Galactopyranoside	200mg / 1g [B3201]
5-Bromo-3-indolyl β-D-Galactopyranoside	20mg / 100mg [B3470]
5-Bromo-4-chloro-3-indolyl β-D-Glucopyranoside	200mg / 1g [B5393]
D-(+)-Cellobiose	5g / 25g [C0056]
6-Chloro-3-indolyl β-D-Galactopyranoside	20mg / 100mg [C2371]
Cellopentaose	25mg [C2644]
Gentiobiose	100mg [G0026]
D-(+)-Glucose	25g / 500g [G0048]
Hyaluronic Acid from Cockscomb	1g [H0595]
Hyaluronic Acid Sodium Salt from Cockscomb	100mg / 1g [H0603]
Hyaluronic Acid Potassium Salt Cockscomb	1g [H0652]
Hyaluronic Acid from Bacteria	1g [H1807]
Hyaluronic Acid Sodium Salt from Bacteria	100mg / 1g [H1791]
Hyaluronic Acid Potassium Salt from Bacteria	1g [H1808]
Isomaltose	100mg / 1g [I0231]
Isomaltotriose	100mg / 1g [I0329]
4-Methylumbelliferyl β-D-Glucopyranoside	250mg / 1g [M3022]
4-Methylumbelliferyl α-D-Mannopyranoside	25mg / 100mg [M3023]
4-Methylumbelliferyl α-L-Arabinopyranoside	50mg / 250mg [M3025]
4-Methylumbelliferyl β-D-Glucuronide Hydrate	100mg / 1g [M3026]
4-Methylumbelliferyl β-D-Ribofuranoside	25mg / 100mg [M3027]
4-Methylumbelliferyl β-D-Cellobioside	100mg / 500mg [M3028]
4-Methylumbelliferyl 2-Acetamido-2-deoxy-β-D-galactopyranoside	250mg / 1g [M3029]
4-Methylumbelliferyl 2-Acetamido-2-deoxy-β-D-gluco-pyranoside	250mg / 1g [M3030]
4-Methylumbelliferyl-N-acetyl-α-D-neuraminic Acid Sodium Salt	50mg [M3031]
4-Nitrophenyl β-D-Glucopyranoside Monohydrate [Substrate for β-D-Glucosidase]	1g / 5g [N0235]
4-Nitrophenyl α-L-Fucopyranoside	10mg / 100mg [N0392]
2-Nitrophenyl β-D-Galactopyranoside [Substrate for β-D-Galactosidase]	1g / 5g / 25g [N0418]
4-Nitrophenyl α-D-Galactopyranoside [Substrate for α-D-Galactosidase]	200mg / 1g [N0492]
4-Nitrophenyl α-D-Glucopyranoside [Substrate for α-D-Glucosidase]	1g / 5g [N0493]
4-Nitrophenyl β-D-Galactopyranoside [Substrate for β-Galactosidase]	1g / 5g [N0616]
4-Nitrophenyl β-D-Glucuronide [Substrate for β-Glucuronidase]	100mg [N0618]
4-Nitrophenyl α-D-Mannopyranoside [Substrate for α-Mannosidase]	1g [N0619]
4-Nitrophenyl β-D-Xylopyranoside [Substrate for β-Xylosidase]	100mg [N0620]
4-Nitrophenyl α-D-Glucuronide	25mg [N0857]
4-Nitrophenyl 2-Acetamido-2-deoxy-β-D-galactopyranoside	50mg / 250mg [N0865]
4-Nitrophenyl 2-Acetamido-2-deoxy-β-D-gluco-pyranoside	200mg / 1g [N0866]
2-Nitrophenyl β-D-Glucopyranoside [Substrate for β-D-Glucosidase]	1g [N1230]
Pectin from Citrus	25g / 500g [P0024]

Anionic Surfactants

Lithium Dodecyl Sulfate (=LDS)	5g / 25g [L0254]
Sodium Dodecyl Sulfate (=SDS)	25g / 500g [S0588]
Tris Dodecyl Sulfate	250mg / 1g [T3071]
Sodium Deoxycholate	25g [D1820]
Sodium Cholate	5g / 25g [S0596]
Sodium <i>N</i>-Lauroylsarcosinate Hydrate	5g / 25g [S0597]

Amphoteric Surfactants

Lauryl Sulfobetaine	5g / 25g [D3860]
Palmityl Sulfobetaine	5g / 25g [H1283]
Myristyl Sulfobetaine	5g / 25g [T2653]
Caprylyl Sulfobetaine	5g / 25g [D4246]
<i>n</i>-Octyl Sulfobetaine	5g [D4247]

Nonionic Surfactants

TRITON™ X-100 (n=approx. 10)	5g / 25g [P1775]
Polyethylene Glycol Monocetyl Ether (n=approx. 25)	5g / 25g [P1776]
Polyethylene Glycol Monododecyl Ether (n=approx. 25)	5g / 25g [P1777]
Tween 20 (=Polyoxyethylene Sorbitan Monolaurate)	5g / 25g [T2530]
Tween 40 (=Polyoxyethylene Sorbitan Monopalmitate)	5g / 25g [T2531]
Tween 60 (=Polyoxyethylene Sorbitan Monostearate)	5g / 25g [T2532]
Tween 80 (=Polyoxyethylene Sorbitan Monooleate)	5g / 25g [T2533]
Tween 85 (=Polyoxyethylene Sorbitan Trioleate)	5g / 25g [T2534]
<i>n</i>-Octyl-β-D-Glucopyranoside	1g [O0355]

Non-Detergent Sulfobetaines (NDSB)

NDSB 211	1g / 5g [H1399]
NDSB 201	5g / 25g [S0813]
NDSB 256-4T	1g [B4030]

Protein Denaturation Reagents

Guanidine Hydrochloride	25g / 100g / 500g [G0197]
Guanidine Thiocyanate	5g / 25g [G0360]
Thiourea	5g / 25g [T2835]
Urea	5g / 25g [U0077]

Biostabilization Agents

2-Aminoethanesulfonic Acid	25g / 500g [A0295]	4-Phenylbutyric Acid	25g / 250g [P0643]
L-Arginine Methyl Ester Dihydrochloride [for Protein Research]	5g [A3531]	Spermine Tetrahydrochloride [for Protein Research]	1g [P2950]
Betaine Hydrochloride	25g / 500g [B0458]	Spermidine Phosphate [for Protein Research]	1g / 5g [P2957]
Glycerol [for Electrophoresis]	1g [G0316]	D-(+)-Sucrose	25g / 500g [S0111]
HFIP	25g / 100g / 500g [H0424]	2,2,2-Trifluoroethanol	25g / 100g / 500g [T0435]
<i>myo</i>-Inositol	25g / 500g [I0040]	Tauroursodeoxycholic Acid Dihydrate	1g / 5g [T1567]
L-Methioninamide Hydrochloride	500mg [M3519]	Ursodeoxycholic Acid	5g / 25g [U0030]

Nucleic Acid Removing Agents for Protein Sample Clarification

Polyethyleneimine (ca. 30% in Water)	25g / 100g [P1921]
Streptomycin Sulfate	5g / 25g [S0834]

Preservatives and Disinfectants

Amprolium Hydrochloride	5g / 25g [A2572]
2-<i>n</i>-Octyl-4-isothiazolin-3-one	1g [O0378]
Dimetridazole	5g / 25g [D4081]
2-Chloroacetamide	5g / 25g [C2536]
5-Bromo-5-nitro-1,3-dioxane	5g [B3769]
1,2-Benzisothiazol-3(2H)-one	5g [B3767]
Sorbic Acid Potassium Salt	5g / 25g [P1954]
Sorbic Acid	5g / 25g [S0856]
1,3-Butanediol	5g / 25g [B3770]
2-Phenoxyethanol	5g / 25g [P1953]
2-Hydroxybenzoic Acid	5g / 25g [H1342]
Benzoic Acid Sodium Salt	5g / 25g [S0855]
Benzylparaben	5g / 25g [B3768]
Isobutylparaben	5g / 25g [I0816]
Butylparaben	5g / 25g [B3771]
Isopropylparaben	5g / 25g [I0817]
Propylparaben	5g / 25g [P1955]
Ethylparaben	5g / 25g [E0884]
Methylparaben	5g / 25g [M2206]

Protein Extraction Reagents

- The target protein can be obtained by suspending tissue or cells and centrifuging.
- Extracted protein can be used directly in downstream analysis such as western blotting.
- Product lineup : suitable for a wide range of subjects, from cultured cells to nervous tissue and microorganisms.

Nervous Tissue Protein Extraction Buffer	100mL [B6279]
RIPA Buffer (Ready-to-use) [for Protein extraction]	100mL [R0246]
E.coli / Yeast Protein Extraction Buffer	100mL [Y0021]

Protein Determination Reagents

Pyrogallol Red-molybdate Protein Assay Reagent	
Pyrogallol Red (Ready-to-use Solution) [for Protein determination]	100mL [P2575]
Bradford Assay Reagent	
Bradford Assay Solution (Ready-to-use Solution) [for Protein determination]	500mL [B5702]
Bicinchoninic Acid (BCA) Assay Reagent	
Bicinchoninic Acid Disodium Salt [for Protein Reaserch]	5g [B5838]
Related Product	
Standard Solution of Albumin from Bovine Serum	5mL [T3796]

Electrophoresis Reagents

Reagents for Gel Preparation, Buffer Preparation, etc.

30% Acrylamide / Bis-acrylamide (29:1)	250mL [A3217]
30% Acrylamide / Bis-acrylamide (37.5:1)	250mL [A3218]
Acrylamide Monomer	25g / 500g [A1132]
Ammonium Peroxodisulfate	5g / 25g [A2098]
Bromophenol Blue Sodium Salt (= BPB)	1g [B3195]
DL-Dithiothreitol (= DL-DTT)	1g / 5g [D3647]
Glycerol	1g [G0316]
Glycine	25g / 500g [G0317]
2-Mercaptoethanol	5g / 25g [M1948]
N,N'-Methylenebisacrylamide	25g / 100g [M0506]
Sodium Dodecyl Sulfate (= SDS)	25g / 500g [S0588]
N,N,N',N'-Tetramethylethylenediamine (= TEMED)	5g / 25g [T2515]
Tris(hydroxymethyl)aminomethane (= Tris-Base)	25g / 500g [T2516]
2X SDS-PAGE Sample Buffer (2-Mercaptoethanol free)	25mL [B5834]
4X SDS-PAGE Sample Buffer (2-Mercaptoethanol free)	20mL [B6104]
6X Sample Buffer (2-Mercaptoethanol free)	10mL [B6105]
2X SDS-PAGE Sample Buffer Phenol Red (2-Mercaptoethanol free)	25mL [B6110]

Gel Staining Reagents

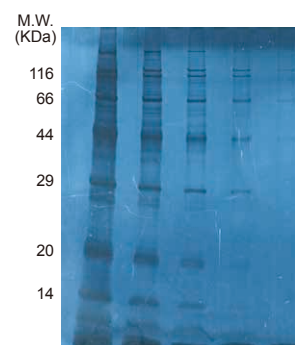
Advantages

- Rapid Staining (approx. 20 minutes)
- Highly Sensitive
- Allows the use of Destained Gels in Downstream Experiments
- Stains 20* Gels per Kit
*90 x 90 x 1 mm gel

Gel Negative Stain kit [for Electrophoresis] 1kit [G0615]

Ready-to-use solution for CBB staining

Coomassie Brilliant Blue G-250 (Ready-to-use Solution) [for Electrophoresis]
500mL [C3488]



Gel after staining with G0615

Reagents for Protein Staining and Others

Acid Black 1 (= Amido Black 10B)	5g [A2097]	Fast Green FCF	5g [F0718]
Acid Red 112 (= Ponceau S)	1g / 5g [A2256]	Sodium Deoxycholate	25g [D1820]
Coomassie Brilliant Blue G-250	5g [B3193]	6-Aminohexanoic Acid	5g / 25g [A2255]
Coomassie Brilliant Blue R-250	5g [B3194]		

Nucleic Acid Sample Preparation Reagents for Electrophoresis

- 6X Loading Buffer Bromophenol Blue** [for Electrophoresis] [for Molecular Biology] (1 mL×3) 1set [L0393]
6X Loading Buffer Double Blue [for Electrophoresis] [for Molecular Biology] (1 mL×3) 1set [L0440]

Nucleic Acid Staining Reagent

- Ethidium Bromide (0.5mg/mL in Water)** (in Dropper Bottle)
 [for Electrophoresis] 10mL [E1363]
10X Nucleic Acid Stain Blue [for Electrophoresis] 100mL [N1209]

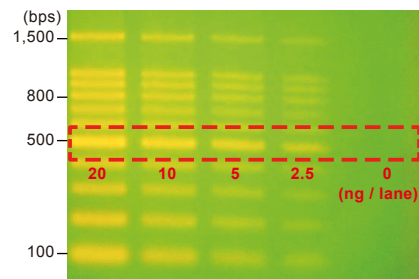
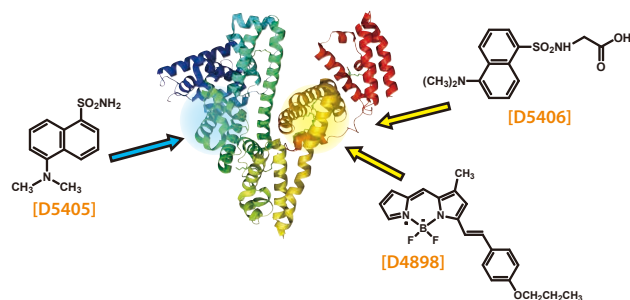


Figure. Agarose gel stained with **E1363**

Fluorescent Probes for the Characterization of Two Specific Drug Binding Sites on HSA

Advantages

- Detectable drug binding to HSA at site I and II.
- Simple and quick assay can be performed.



Fluorescent probe for drug binding site 1

Dansylamide [for Albumin binding assay] 25mg / 100mg [D5405]

Fluorescent probes for drug binding site 2

BD140 [for Albumin binding assay] 25mg / 100mg [D4898]

Dansylglycine [for Albumin binding assay] 25mg / 100mg [D5406]

References G. Sudlow, D. J. Birkett, D. N. Wade, *Mol. Pharmacol.* **1975**, *11*, 824.
 G. Sudlow, D. J. Birkett, D. N. Wade, *Mol. Pharmacol.* **1976**, *12*, 1052.
 J. C. Er, M. Vendrell, M. K. Tang, D. Zhai, Y.-T. Chang, *ACS Comb. Sci.* **2013**, *15*, 452.

Ubiquitin-Proteasome System (UPS) Research Reagents

E3 Ubiquitin Ligase Inhibitors

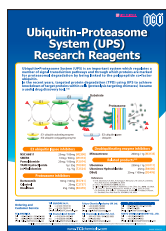
Lenalidomide	250mg / 1g [L0332]	Pomalidomide	25mg / 100mg [P2074]
NSC 66811	25mg / 100mg [M2390]	TAME Hydrochloride	1g / 25g [T0330]
SMER3	10mg / 50mg [M3172]	(±)-Thalidomide	1g / 5g [T2524]

Proteasome Inhibitors

Bortezomib	10mg / 50mg [B5741]	Disulfiram	25g / 500g [B0479]
Celastrol	25mg [C2737]		

Deubiquitinating Enzyme Inhibitors

Mitoxantrone 200mg / 1g [M3133]



Other related products are also available.

For more information, please refer to the product category page of our website or the product brochure "Ubiquitin-Proteasome System (UPS) Research Reagents".

TCI ubiquitin



Thiol Quantification Kit

- Enables highly sensitive detection of thiol groups.
- Using Ellman's reagent instead of antibodies allows for measurement irrespective of species-of-origin.
- Two vials of both Ellman's reagent and thiol standard are included to allow for a total of two reactions from one kit.
- The reaction products are soluble and have an absorption maximum wavelength at 412 nm.
- Enables accurate quantification of thiol groups in a concentration range of 10 - 1000 μM .

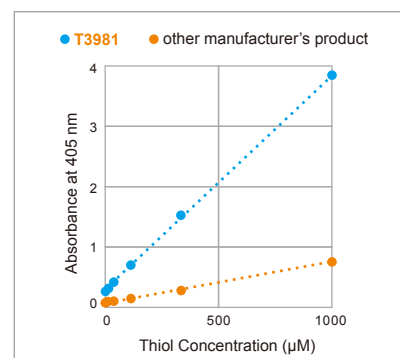
Thiol Quantification Kit

1kit [T3981]

Related Product

5,5'-Dithiobis(2-nitrobenzoic Acid) (= DTNB) [for Determination of SH groups]

1g / 5g / 25g [D0944]

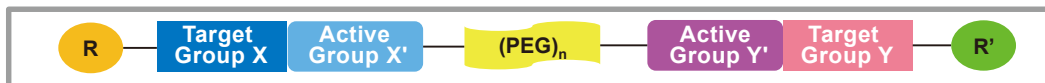


Our product [T3981] shows higher sensitivity in detection of thiol groups compared to another manufacturer's product.

Cross-linkers

PEG Linkers

Selection Guide

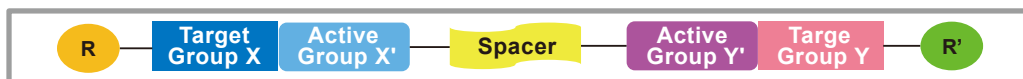


Target Group X	Target Group Y	PEG Linkers	
Amino	Amino	NHS Ester-(PEG) _n -NHS Ester	[B3728](PEG5) [B4688](PEG9)
	Carboxy	Carboxy Group-(PEG) _n -Amino Group	[A3120](PEG2) [A2526](PEG6)
		Carboxy Group-(PEG) _n -Boc Amino Group	[B5665](PEG4) [B5651](PEG6)
		Carboxy Group-(PEG) _n -Fmoc Amino Group	[F0719](PEG2) [F0999](PEG2) [F1183](PEG6) [F1238](PEG12)
	Thiol	NHS Ester-(PEG) _n -Maleimide Group	[M3079](PEG2)
		Carboxy Group-(PEG) _n -Maleimide Group	[M2666](PEG4)
		NHS Ester-(PEG) _n -Protected Thiol Group	[N1119](PEG4)
	Alkyne Cyclooctyne	NHS Ester-(PEG) _n -Azido Group	[A2388](PEG4)
Carboxy Group-(PEG) _n -Azido Group		[A3224](PEG2) [A2293](PEG3)	
Azide	NHS Ester-(PEG) _n -Alkyne	[P2283](PEG5)	
Carboxy	Carboxy	Amino Group-(PEG) _n -Amino Group	[B1431](PEG2) [D3664](PEG3) [T3198](PEG4) [D1571](PEG3)
	Azido	Amino Group-(PEG) _n -Alkyne	[P2225](PEG2)
		Amino Group-(PEG) _n -Cyclooctyne	[B4062](PEG2)
	Alkyne Cyclooctyne	Amino Group-(PEG) _n -Azido Group	[A3130](PEG2) [A2363](PEG3) [A3004](PEG4) [A3007](PEG11)
Other	Azido	Hydroxy Group-(PEG) _n -Alkyne	[D4580](PEG2) [T3114](PEG3)
	Alkyne / Cyclooctyne	Hydroxy Group-(PEG) _n -Azido Group	[A2294](PEG3) [A2500](PEG4)

Bis(NHS)PEG5	100mg / 500mg	[B3728]	Propargyl-PEG5-NHS Ester	25mg	[P2283]
Bis(NHS)PEG9	25mg / 100mg	[B4688]	1,2-Bis(2-aminoethoxy)ethane	25g / 100g / 500g	[B1431]
Amino-PEG2-acetic Acid	250mg / 1g	[A3120]	1,11-Diamino-3,6,9-trioxaundecane	1g	[D3664]
Amino-PEG6-carboxylic Acid	100mg / 500mg	[A2526]	1,14-Diamino-3,6,9,12-tetraoxatetradecane	100mg	[T3198]
(Boc-amino)-PEG4-carboxylic Acid	250mg / 1g	[B5665]	Diethylene Glycol Bis(3-aminopropyl) Ether	25mL / 100mL / 500mL	[D1571]
21-(Boc-amino)-4,7,10,13,16,19-hexaoxaheneicosanoic Acid	250mg	[B5651]	Alkynyl-PEG2-Amine	1g / 5g	[P2225]
Fmoc-NH-PEG2-CH₂COOH	200mg / 1g	[F0719]	BCN-amine	25mg / 100mg	[B4062]
Fmoc-NH-PEG2-CH₂CH₂COOH	200mg / 1g	[F0999]	Azido-PEG2-Amine-Tos-OH	250mg / 1g	[A3130]
(Fmoc-amino)-PEG6-carboxylic Acid	250mg	[F1183]	Azido-PEG3-Amine	200mg / 1g / 5g	[A2363]
(Fmoc-amino)-PEG12-C₂-Carboxylic Acid	100mg	[F1238]	Azido-PEG4-Amine	50mg / 250mg	[A3004]
Maleimide-PEG2-NHS Ester	50mg / 250mg	[M3079]	Azido-PEG11-Amine	50mg / 250mg	[A3007]
19-Maleimido-17-oxo-4,7,10,13-tetraoxa-16-azanonadecanoic Acid	25mg / 100mg	[M2666]	Diethylene Glycol Mono(2-propyn-1-yl) Ether	1g	[D4580]
NHS-PEG4-SPDP	100mg	[N1119]	Triethylene Glycol Mono(2-propynyl) Ether	1g / 5g	[T3114]
Azido-PEG4-NHS Ester	25mg	[A2388]	PEG4-Azide	100mg	[A2294]
Azido-PEG2-acetic Acid CHA Salt	100mg	[A3224]	Azido-PEG5	100mg	[A2500]
11-Azido-3,6,9-trioxaundecanoic Acid	1g	[A2293]			

Bifunctional Linkers

Selection Guide



Target Group X	Target Group Y	Linker	
Amino	Amino	NHS Ester-(Spacer)-NHS Ester	[D1662][D3895][D4019]
		NHS Ester-(Disulfide)-NHS Ester	[D2473]
		Carboxy Group-(Disulfide)-Carboxy Group	[D0945][D0947][D1757][D3670]
		Aldehyde Group-(Spacer)-Aldehyde Group	[G0067][G0068]
		Imide Ester-(Spacer)-Imide Ester	[A0806][P0892][S0246]
		Fluorobenzene-(Spacer)-Fluorobenzene	[D1649][D0536]
	Carboxy	Carboxy Group-(Spacer)-Amino Group	[G0099][A0180][A0282][A0663][A0312][A0311][A0932]
		NHS Ester-(Spacer)-Boc Amino Group	[B5684]
	Thiol	NHS Ester-(Spacer)-Maleimide Group	[S0427][S0399][S0428][S0882][S0853][S0883][S0398][S0861][S0881]
		Carboxy Group-(Spacer)-Maleimide Group	[M1962][M2337][M2338][M3143]
		Carboxy Group-(Spacer)-Thiol Group	[M0052]
		NHS Ester-(Spacer)-Protected Thiol Group	[S0431][S0859][S0819]
		Carboxyl Group-(Spacer)-Disulfide	[L0058]
		Carboxy Group-(Spacer)-Alkyne/Cyclooctyne	[P0497][H0882][U0054][P2341]
		Carboxy Group-(Spacer)-Azido Group	[A2729]
		NHS Ester-(Spacer)-Acrylic Group	[S0814][S0812]
	Other	NHS Ester-(Spacer)-Other Group	[S0852][S0844][S0893]
Carboxy	Thiol	Amino Group-(Spacer)-Maleimide Group	[A2436]
		Amino Group-(Spacer)-Thiol Group	[A0648]
	Azido	Amino Group-(Spacer)-Alkyne/Cyclooctyne	[P0911][A2763]
	Alkyne / Cyclooctyne	Amino Group-(Spacer)-Azido Group	[A2738]
Aldehyde	Aldehyde	Hydrazide Group-(Spacer)-Hydrazide Group	[C0803][O0083][S0482][A0170][A0746][S0224][D2342]
	Thiol	Hydrazide Group-(Spacer)-Maleimide Group	[M2703][M2735]
Thiol	Thiol	Maleimide Group-(Spacer)-Maleimide Group	[B3805][E0482][B1787]
	Azido	Maleimide Group-(Disulfide)-Maleimide Group	[B5699]
Azido	Other	Alkyne-(Spacer)-Hydroxy Group	[P0536][B0799][P0817][H0687][H1474][O0445][D3710][U0055]
		Cyclooctyne-(Spacer)-Hydroxy Group	[B5467]

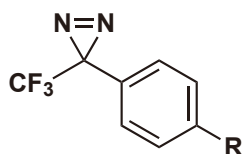
Di(<i>N</i>-succinimidyl) Carbonate	5g / 25g [D1662]	Dimethyl Pimelimidate Dihydrochloride	5g / 25g [P0892]
Di(<i>N</i>-succinimidyl) Suberate	1g / 5g [D3895]	Dimethyl Suberimidate Dihydrochloride	5g / 25g [S0246]
Di(<i>N</i>-succinimidyl) Sebacate	1g / 5g [D4019]	1,5-Difluoro-2,4-dinitrobenzene	5g / 25g [D1649]
Di(<i>N</i>-succinimidyl) 3,3'-Dithiodipropionate	200mg / 1g / 5g [D2473]	Bis(4-fluoro-3-nitrophenyl) Sulfone	10g [D0536]
Dithiodiglycolic Acid	25g [D0945]	Glycine	25g / 500g [G0099]
3,3'-Dithiodipropionic Acid	25g / 100g / 500g [D0947]	β-Alanine	25g / 500g [A0180]
4,4'-Dithiodibutyric Acid	5g / 25g [D1757]	4-Aminobutyric Acid	25g / 100g / 500g [A0282]
4,4'-Dithiodibutyric Acid	1g [D3670]	5-Aminovaleric Acid	5g / 25g [A0663]
Glutaraldehyde (24-26% in Water)	25mL / 500mL [G0067]	6-Aminohexanoic Acid	25g / 500g [A0312]
Glutaraldehyde (ca. 50% in Water, ca. 5.6mol/L)	25mL / 500mL [G0068]	7-Aminoheptanoic Acid	1g / 5g / 25g [A0311]
Dimethyl Adipimidate Dihydrochloride	5g / 25g [A0806]	12-Aminolauric Acid	25g / 500g [A0932]
		Boc-NH-C₆-NHS	1g / 5g [B5684]

Bifunctional Linkers

BMPS	100mg / 1g / 5g	[S0427]	2-Aminoethanethiol	25g / 500g	[A0648]
GMBS	100mg / 1g / 5g / 25g	[S0399]	Propargylamine	5mL / 25mL	[P0911]
EMCS	1g / 5g / 25g	[S0428]	Dibenzocyclooctyne-amine	25mg / 100mg	[A2763]
KMUS	20mg	[S0882]	3-Azidopropylamine	100mg	[A2738]
SMCC	100mg / 1g	[S0853]	Carbohydrazide	25g / 500g	[C0803]
Sulfo-SMCC Sodium Salt	20mg / 100mg	[S0883]	Oxalyl Dihydrazide	25g	[O0083]
MBS	100mg / 1g	[S0398]	Succinic Dihydrazide	25g / 100g / 500g	[S0482]
SMPB	10mg	[S0861]	Adipic Dihydrazide	25g / 250g	[A0170]
LC-SMCC	25mg	[S0881]	Azelaic Dihydrazide	25g	[A0746]
3-Maleimidopropionic Acid	200mg / 1g / 5g	[M1962]	Sebacic Dihydrazide	25g / 500g	[S0224]
4-Maleimidobutyric Acid	1g / 5g	[M2337]	Dodecanedioic Dihydrazide	25g / 500g	[D2342]
6-Maleimidoheptanoic Acid	1g / 5g	[M2338]	6-Maleimidohexanehydrazide Trifluoroacetate	250mg	[M2735]
2-Maleimidoacetic Acid	50mg / 250mg	[M3143]	1,4-Bis(maleimido)butane	100mg / 1g	[B3805]
Thioglycolic Acid	25g / 500g	[M0052]	1,2-Bis(maleimido)ethane	100mg	[E0482]
N-Succinimidyl 5-Acetylthioglycolate	1g / 5g	[S0431]	1,6-Bis(maleimido)hexane	100mg	[B1787]
N-Succinimidyl 3-(Acetylthio)propionate	100mg	[S0859]	Bis(2-maleimidoethyl) Disulfide	25mg / 100mg	[B5699]
N-Succinimidyl 3-(2-Pyridyldithio)propionate	250mg / 1g / 5g	[S0819]	DBCO-maleimide	25mg	[D4739]
DL-α-Lipoic Acid	5g / 25g	[L0058]	N-Propargylmaleimide	25mg / 100mg	[P2139]
Propiolic Acid	5g / 25g	[P0497]	2-Propyn-1-ol	25mL / 100mL / 500mL	[P0536]
5-Hexynoic Acid	5g / 25g	[H0882]	3-Butyn-1-ol	5mL / 25mL	[B0799]
10-Undecynoic Acid	1g / 5g	[U0054]	4-Pentyn-1-ol	5mL / 25mL	[P0817]
4-Pentynoic Acid	1g / 5g	[P2341]	5-Hexyn-1-ol	5mL / 25mL	[H0687]
5-Azidovaleric Acid	200mg	[A2729]	6-Heptyn-1-ol	5mL	[H1474]
N-Succinimidyl Acrylate	5g / 25g	[S0814]	7-Octyn-1-ol	1mL / 5mL	[O0445]
N-Succinimidyl Methacrylate	5g / 25g	[S0812]	9-Decyn-1-ol	5g / 25g	[D3710]
N-Succinimidyl Bromoacetate	100mg	[S0852]	10-Undecyn-1-ol	5g	[U0055]
N-Succinimidyl Iodoacetate	100mg	[S0844]	BCN-OH	100mg	[B5467]
N-Succinimidyl 4-Formylbenzoate	100mg	[S0893]			
N-(2-Aminoethyl)maleimide Hydrochloride	200mg / 1g	[A2436]			

Photo-reactive Crosslinkers

Phenyldiazirines



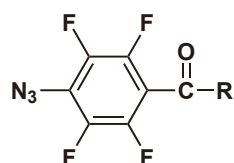
R = CH₂OH [T2818]
 CH₂Br [T2819]
 COOH [T2820]
 CH₂NH₂·HCl [T3448]

Phenyldiazirine generates a carbene unit by UV irradiation (<360 nm). Phenylcarbene can crosslink by short-time irradiation due to higher reactivity than nitrenes. Phenylcarbene is inactivated by water when neighboring target molecules are absent, and thus does not lead to non-specific crosslinking.

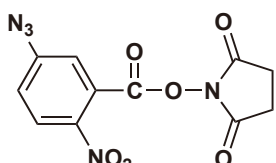
4-[3-(Trifluoromethyl)-3H-diazirin-3-yl]benzyl Alcohol	200mg / 1g [T2818]
4-[3-(Trifluoromethyl)-3H-diazirin-3-yl]benzyl Bromide	200mg / 1g [T2819]
4-[3-(Trifluoromethyl)-3H-diazirin-3-yl]benzoic Acid	200mg / 1g [T2820]
4-[3-(Trifluoromethyl)-3H-diazirin-3-yl]benzylamine Hydrochloride	200mg / 1g [T3448]

Phenylazides

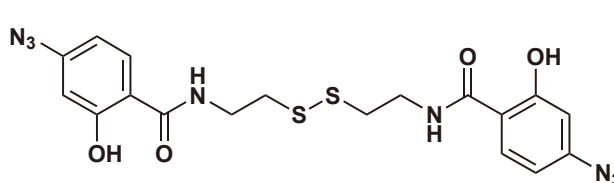
Phenylazide generates a nitrene by UV irradiation (<300 nm). It is noted that azido groups tend to have less harmful effect on target analyte. Activation of the nitrene requires a shorter wavelength of UV light, and potential protein denaturation during long-period irradiation should be taken into consideration.



R = OH [A2674]
 NHS [S0952]



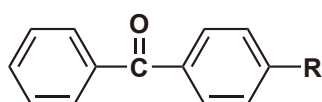
[S0860]



[B3790]

4-Azido-2,3,5,6-tetrafluorobenzoic Acid	1g [A2674]
4-Azido-2,3,5,6-tetrafluorobenzoic Acid <i>N</i> -Succinimidyl Ester	200mg / 1g [S0952]
5-Azido-2-nitrobenzoic Acid <i>N</i> -Succinimidyl Ester	10mg [S0860]
Bis[2-(4-azidosalicylamido)ethyl] Disulfide	10mg [B3790]

Benzophenones



R = CO-NHS [S0863]
 R = maleimide [M3259]

Benzophenone excited by UV irradiation (near 360 nm) to induce hydrogen abstraction from target molecules. The reaction efficiency remains high despite this due to the reverseability of the excited state. Additionally, photoexcited benzophenone is not water-reactive.

4-Benzoylbenzoic Acid <i>N</i> -Succinimidyl Ester	200mg / 1g [S0863]
4-(<i>N</i> -Maleimido)benzophenone	50mg / 250mg [M3259]

Copper-free Click Reaction Reagents

The copper(I)-free click reactions of these linkers with azides proceed due to the strained structure of the cyclooctyne/azacyclooctyne moiety.

BCN-amine	25mg / 100mg [B4062]	DBCO-Acid	250mg [D5677]
BCN-OH	100mg [B5467]	DBCO-S-S-PEG3-Biotin	25mg [D5552]
BCN-CO-NHS (2mg×5)	1set [B6215]	DBCO-PEG4-NHS Ester	25mg [D5922]
BCN-CO-NHS	10mg / 100mg [B6275]	DBCO-NHS	25mg [D5999]
SCO-PEG2-Maleimide	5mg / 25mg [C3700]	HSA-DBCO	1vial [H1795]
DBCO-amine	25mg / 100mg [A2763]		
DBCO-maleimide	25mg [D4739]		
DBCO-maleimide (2mg×5)	1set [D5849]		

PEGylation Reagents

Applicable to the preparation of PEGylated antibodies, antibody-drug conjugates, etc.

mPEG4-NHS Ester	25mg [M2186]
mPEG8-NHS Ester	25mg [M2187]
mPEG12-NHS Ester	25mg [M2188]
mPEG4-Amine	100mg [M2501]
mPEG8-Amine	50mg / 250mg [O0457]
mPEG24-Amine	25mg / 100mg [M3048]
mPEG12-Maleimide	25mg [M3051]
mPEG24-Maleimide	25mg [M3052]
mPEG4-(R)-Lipoamide	10mg / 50mg [T3199]
mPEG4-Alkyne	25mg / 100mg [P2249]
mPEG4-Azide	25mg / 100mg [A2728]
mPEG8-Azide	25mg / 100mg [A2727]
mPEG12-Azide	25mg [M3049]
mPEG24-Azide	25mg / 100mg [M3050]
mPEG2-Bromide	5g / 25g [B4736]
mPEG3-Bromide	5g / 25g [D3831]
mPEG4-Bromide	5g / 25g [T2634]
mPEG2-Alcohol	25mL / 500mL [M0537]
mPEG3-Alcohol	25mL / 500mL [T0709]
mPEG4-Alcohol	5g / 25g [T1372]
mPEG5-Alcohol	1g / 5g [P1159]
mPEG6-Alcohol	1g / 5g / 25g [H0808]
mPEG7-Alcohol	1g / 5g [H1046]
mPEG8-Alcohol	1g / 5g [O0296]
mPEG9-Alcohol	500mg / 1g [N0699]
mPEG12-Alcohol	100mg / 1g [D2904]

Peroxidase (HRP) Labeling Reagents

Advantages

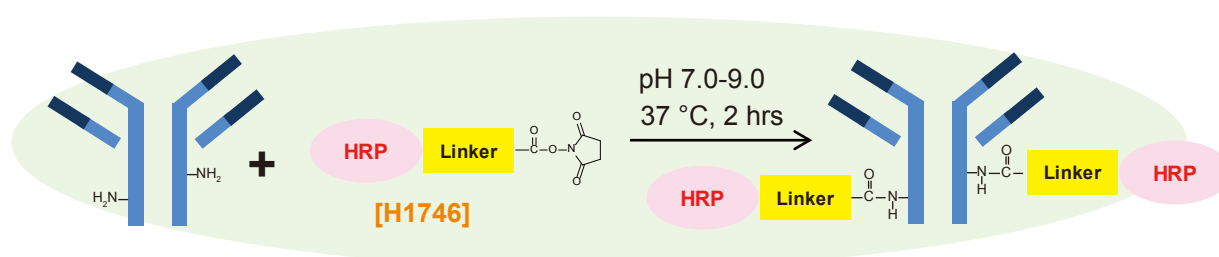
- Each protein conjugate is packaged for single use purposes and thus does not require weighing prior to use.
- **H1621** containing a thiol-reactive maleimide group can be used for the conjugation to proteins and peptides containing free thiols.
- **H1746** contains an *N*-hydroxysuccinimidyl ester (NHS) moiety. It can be used to readily label proteins and peptides that have an amino group (-NH₂).

Horseradish Peroxidase Maleimide Conjugate (0.5mg×3)

1set **[H1621]**

Horseradish Peroxidase NHS Ester Conjugate (0.2mg×3)

1set **[H1746]**



Protein-maleimide Conjugates for Thiol-maleimide Crosslinking

Advantages

- Each product containing a thiol-reactive maleimide group can be used for the conjugation to proteins and peptides containing free thiols.
- Each protein conjugate is packaged for single use purposes and thus does not require weighing prior to use.

Bovine Serum Albumin Maleimide Conjugate (1mg×3)

1set **[B5944]**

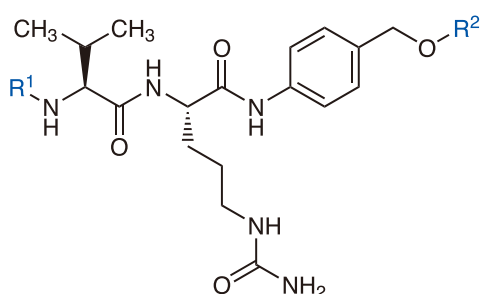
Streptavidin Maleimide Conjugate (0.5mg×1)

1vial **[T3531]**

Enzymatically Cleavable Linkers for Antibody-Drug Conjugates (ADCs)

Advantages

- Contain peptide sequence degradable by a lysosome enzyme.
- Have superior plasma stability comparable to that of non-cleavable linkers.



R¹ = H, R² = H

Val-Cit-PAB-OH

25mg / 100mg **[V0155]**

R¹ = Fmoc, R² = H

Fmoc-Val-Cit-PAB-OH

25mg / 100mg **[F1223]**

R¹ = Fmoc, R² = C(=O)O-pNP

Fmoc-Val-Cit-PAB-PNP

100mg / 500mg **[F1114]**

R¹ = Alloc, R² = H

Alloc-Val-Cit-PAB-OH

250mg / 1g **[A3348]**

R¹ = C(=O)(CH₂)₅-maleimide, R² = H

MC-Val-Cit-PAB-OH

100mg / 500mg **[M3224]**

R¹ = C(=O)(CH₂)₅-maleimide, R² = C(=O)O-pNP

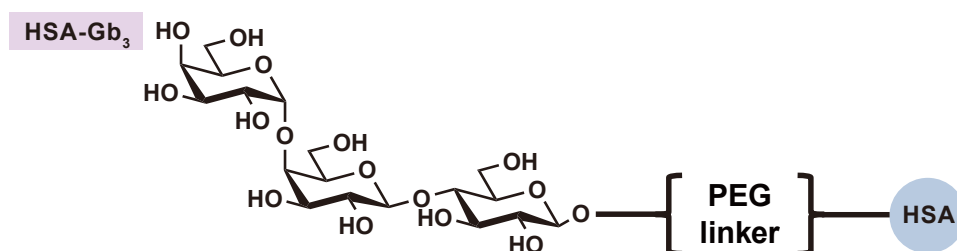
MC-Val-Cit-PAB-PNP

500mg **[M3209]**

Protein-Oligosaccharide Conjugates

Advantages

- Consists of synthetic sugar conjugated to human serum albumin (HSA).
 - Contains no animal-derived components because recombinant HSA produced in plants is used.
 - Has the same structure, characteristics, and physiological activity as natural human serum albumin.
- In addition to the glycoconjugates introduced below, we can also manufacture glycoproteins on consignment to meet your needs. Please contact us for more information.



HSA-Gb₃	0.1mg/vial [H1718]	HSA-GM₁ Pentasaccharide	0.1mg/vial [H1767]
HSA-Gb₅	0.1mg/vial [H1777]	HSA-Globo-H	0.1mg/vial [H1794]
HSA-Lewis X	0.1mg/vial [H1719]	HSA-L1-L1	0.1mg/vial [H1782]
HSA-Sialyl Lewis X	0.1mg/vial [H1730]		

Apoptosis Inhibitors

SB 203580	25mg / 100mg [F0864]	Teprenone	1g / 5g [T2701]
Mdivi-1	10mg / 50mg [M3108]		

Apoptosis Inducers

9-Aminocamptothecin	10mg [A2063]	Belinostat	25mg / 100mg [B5888]
AICAR	50mg [A2528]	Baohuoside I	25mg [B6443]
ABT-751	10mg / 50mg [A3169]	(S)-(+)-Camptothecin	100mg / 1g [C1495]
Bexarotene	100mg [B4798]	Carboplatin	100mg / 1g [C2043]
BAY 11-7085	10mg / 100mg [B4845]	Combretastatin A4	250mg [C2520]
Bortezomib	10mg / 50mg [B5741]	Cinobufagine	25mg / 100mg [C3460]
BIIB 021	25mg / 100mg [B5775]	SC-560	25mg / 100mg [C3572]

Apoptosis Inducers

Chelerythrine Chloride	25mg / 100mg [C3584]	Meisoindigo	25mg / 100mg [M3082]
Cephalotaxine	25mg / 100mg [C3641]	MG-132	10mg [M3244]
Cisplatin	100mg / 1g [D3371]	9-Nitrocamptothecin	100mg [N0822]
Docetaxel	100mg / 1g [D4102]	Norcantharidin	1g [N0914]
M 344	20mg / 100mg [D4188]	Noscapine Hydrochloride Hydrate	5g [N0963]
Deferoxamine Mesylate	100mg [D4245]	Nutlin-3	10mg / 50mg [N1195]
DRB	100mg / 1g [D4292]	Oxaliplatin	100mg [O0372]
Daunorubicin Hydrochloride	20mg / 100mg [D4532]	Sodium 4-Phenylbutyrate	1g / 5g [O0511]
Vadimezan	50mg / 250mg [D5235]	Piroxicam	10g [P1905]
Dacomitinib	50mg [D5450]	Parthenolide	25mg / 100mg [P1982]
Etoposide	100mg / 1g [E0675]	Piperlongumine	25mg [P2361]
7-Ethyl-10-hydroxycamptothecin	100mg / 1g [E0748]	Peiminine	10mg / 50mg [P2609]
7-Ethylcamptothecin	100mg / 1g [E0781]	Physcion	100mg [P2931]
L-Selenocystine	250mg [E1368]	Raptinal	25mg / 100mg [R0199]
Entinostat	100mg [E1454]	Rottlerin	25mg [R0266]
Erucin	50mg / 250mg [E1455]	Sulindac Sulfide	25mg [S0906]
Fludarabine Monophosphate	25mg / 100mg [F0913]	D-α-Tocopherol Succinate	5g / 25g [T2628]
Fenretinide	10mg / 100mg [H1464]	BAY 11-7082	100mg / 1g [T2846]
Flavokawain A	1g / 5g [H1571]	Triptolide	10mg [T2899]
(\pm)-Shikonin	10mg / 50mg [H1780]	Taurolidine	250mg [T3980]
Irinotecan Hydrochloride Trihydrate	100mg [I0714]	Staurosporine	10mg [T4000]
Idelalisib	200mg [I1005]	Ursodeoxycholic Acid	5g / 25g [U0030]
Indirubin-3'-monoxime	50mg [I1118]	Ulipristal Acetate	50mg / 250mg [U0102]
LFM-A13	10mg / 50mg [L0309]	VK₃-OCH₃	50mg [V0173]
Lenalidomide	250mg / 1g [L0332]	Wedelolactone	1mg / 10mg [W0015]
Ametycin	10mg / 50mg [M2320]	Zearalenone	100mg [Z0047]

Ferroptosis Inhibitors

Trolox Inhibitor of ferroptosis; antioxidant	1g / 5g [H0726]	Ebselen Inhibitor of ferroptosis; Inhibits lipoxygenase, cyclooxygenase, nitric oxide synthase, protein kinase C and H ⁺ /K ⁺ -ATPase activity. Inhibits the hepatic carcinogenic effects of aflatoxin B1.	25mg / 100mg [E0946]
Baicalein Inhibitor of ferroptosis; 5- and 1-lipoxygenase inhibitor	1g / 5g [T2721]	Idebenone Inhibitor of ferroptosis; blocks glutamate neurotoxicity <i>in vitro</i> and <i>in vivo</i>	1g / 5g / 25g [I0848]
Coenzyme Q₁₀ (= CoQ₁₀) Inhibitor of ferroptosis; antioxidant	100mg / 1g [C1971]		
Ferrostatin-1 Inhibitor of ferroptosis	25mg / 100mg [F1302]		

Ferroptosis Activators

L-Glutamic Acid Induces ferroptosis; endogenous, non-selective agonist	25g / 500g [G0059]	Sulfasalazine Induces ferroptosis; cystine-glutamate antiporter inhibitor and inhibitor of NF- κ B activation	25g [S0580]
Simvastatin Induces ferroptosis; HMG-CoA reductase inhibitor	100mg / 1g [S0509]		

Reactive Oxygen Species (ROS) and Oxidative Stress Research Reagents

Nitric Oxide (NO) Generators

Flu-DNB Monohydrate	5mg [D3959]
N-Nitrosodiphenylamine	25g / 500g [D0899]
Ruthenium(II) Nitrosyl Chloride	1g [R0086]

Nitroxyl (HNO) Generators

9,10-Dihydro-9,10-bis(2-carboxyethyl)- N-(4-nitrophenyl)-10,9-(epoxyimino)- anthracene-12-carboxamide	100mg [D3929]
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ROS Detection Reagents

For Griess Method

Sulfanilamide	5g [S0833]
N-(1-Naphthyl)ethylenediamine Dihydrochloride	5g [N0869]

For ESR

PTIO	1g / 5g [A5440]
DMPO	1g / 5g [D2362]
PBN	1g / 5g [B1701]
3-Carboxy-PROXYL Free Radical	1g [C1406]

For Chemiluminescent Method

Luminol	1g / 25g [A5301]
MCLA	10mg [A5309]
Lucigenin	1g / 5g [B1203]
MMT	100mg / 1g [B4339]

For Chromogenic Method

DPPP	100mg / 1g [D2404]
Resazurin Sodium Salt	1g / 5g [R0203]
Resorufin	1g / 5g [R0012]
DPPH Free Radical	1g / 5g [D4313]
Sodium Sulfanilate Hydrate	5g [S0832]
2,3-Diaminonaphthalene	1g / 5g [D1045]
1-Naphthylamine	25g / 100g [N0052]
Sulfanilic Acid	25g / 500g [S0120]
Nitro Blue Tetrazolium	100mg / 1g [D0844]

Related Products

Trolox	1g / 5g [H0726]
L-Ascorbic Acid	25g / 500g [A0537]
Xanthine	25g [X0004]

Nitric Oxide Synthase (NOS) Inhibitors

Aminoguanidine Sulfate	25g / 500g [A0309]	S-Methylisothiurea Sulfate	25g / 100g / 500g [M0442]
L-Canavanine Sulfate	100mg [C0018]	Melatonin	1g / 5g [M1105]
2,4-Diamino-6-hydroxypyrimidine	25g [D1321]	6-Nitroindazole	25g / 250g [N0399]
S-Ethylisothiurea Hydrobromide	25g / 100g [E0182]	L-NNA	5g / 25g [N0660]
Haloperidol	5g / 25g [H0912]	L-NAME Hydrochloride	5g / 25g [N0661]
		7-Nitroindazole	1g / 5g [N0827]
		PDTC	25g / 250g [P0644]

Regenerative Medicine Research Reagents

For 2i and 3i Culture Media

CHIR 99021	25mg / 100mg [C2943]
PD 184352	25mg / 100mg [P2174]

References

Q. Ying *et al.*, *Nature* **2008**, 453, 519.
K. Nishihara *et al.*, *Stem Cell Rep.* **2019**, 12, 305.

For Maintaining Undifferentiated iPS Cells

Kenpaullone	10mg / 50mg [K0052]
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Reference

C. A. Lyssiotis *et al.*, *Proc. Natl. Acad. Sci. U.S.A.* **2009**, 106, 8912.

SB 431542	25mg / 100mg [B4003]
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Reference

J. K. Ichida *et al.*, *Cell Stem Cell* **2009**, 5, 491.

BIX 01294 Trihydrochloride	25mg [B4211]
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Reference

Y. Shi *et al.*, *Cell Stem Cell* **2008**, 2, 525.

*These products are not guaranteed for cell culture applications. They are not sterilized, and should be passed through a sterilization filter before use.

For Induction of Differentiation into Nerve Cells

Baicalin	25g [B2835]
Bucladesine Sodium Salt	25mg [D4228]
DAPT	25mg [D4257]
Fluoxetine Hydrochloride	1g / 5g [F0750]
Forskolin	10mg / 50mg [F0855]
Isoxazole	5g [I0372]
Metformin Hydrochloride	25g / 100g [M2009]
Paclitaxel	100mg [P1632]
Phenazopyridine Hydrochloride	25g [B0022]
Putrescine Dihydrochloride	25g / 500g [D0081]
Retinoic Acid	1g / 5g [R0064]
SB 216763	10mg / 50mg [B5716]

For Induction of Differentiation into Osteoblasts

AICAR	50mg [A2528]
L-Ascorbic Acid	25g / 500g [A0537]
L-Ascorbic Acid 2-Phosphate Sesquimagnesium Salt Hydrate	5g / 25g [A2521]
Bisindolylmaleimide I	5mg / 25mg [B5781]
TH	10mg / 50mg [M3085]

For Induction of Differentiation into Cardiomyocytes

L-Ascorbic Acid	25g / 500g [A0537]
L-Ascorbic Acid 2-Phosphate Sesquimagnesium Salt Hydrate	5g / 25g [A2521]
5-Azacytidine	100mg / 1g [A2033]
IWP-2	10mg / 50mg [I1097]
Spermine Tetrahydrochloride	5g / 25g [B1468]
XAV 939	100mg [X0077]

For Induction of Differentiation into Adipocytes

Indomethacin	25g / 100g / 500g [I0655]
Linolenic Acid	25mL [L0050]
Rosiglitazone	200mg / 1g [R0106]

*These products are not guaranteed for cell culture applications. They are not sterilized, and should be passed through a sterilization filter before use.

For Cell Initialization and Self-renewal

Azidothymidine (= AZT)	1g / 5g [A2052]
Betulinic Acid	100mg / 1g [B2836]
BIO	5mg / 25mg [B4006]
BRL 50481	200mg / 1g [T3112]
Colchicine	500mg / 5g [C0380]
Cyclic Pifithrin-α Hydrobromide	20mg / 100mg [C2826]
Docetaxel	100mg / 1g [D4102]
Doxorubicin Hydrochloride	25mg / 100mg [D4193]
Eosine	25g [T0037]
5-(4-Ethylbenzylidene)rhodanine	25mg [E0959]
Flurbiprofen	5g / 25g [F0371]
Geldanamycin	10mg [G0334]
(+)-Griseofulvin	5g / 25g [G0384]
Indirubin	25mg [I0868]
Isoproterenol Hydrochloride	5g / 25g [I0260]
Meclofenoxate Hydrochloride	1g / 5g [M2460]
PD 184352	25mg / 100mg [P2174]
PD 98059	10mg [A2529]
Phenethyl Caffeate	25mg / 250mg [P2088]
Pifithrin-μ	10mg / 100mg [P2048]
PluriSIn 1	20mg / 100mg [I0975]
Rapamycin	25mg [R0097]
SB 203580	25mg / 100mg [F0864]
SU 3327	20mg / 100mg [A2940]
L-Theanine	1g / 5g [T0954]
TMPyP	100mg / 1g [A5014]
Trichostatin A	10mg / 50mg [T2477]
Valproic Acid	25mL / 100mL / 500mL [P0823]
Valproic Acid Sodium Salt	25g / 100g [S0894]

*These products are not guaranteed for cell culture applications. They are not sterilized, and should be passed through a sterilization filter before use.



Other related products are also available.

For more information, please see the product category pages on our website or the product brochure "Regenerative Medicine Research Reagents".



Receptor Tyrosine Kinase (RTK) Inhibitors

EGFR (ErbB) Family Inhibitors

AEE 788	5mg / 25mg [A3271]
Butein	100mg / 1g [B3803]
PD 153035 Hydrochloride	25mg / 100mg [B4945]
BMS-599626	10mg / 50mg [B5520]
Curcumin (Natural)	1g / 25g [C0434]
Curcumin (Synthetic)	5g / 25g [C2302]
Daphnetin	1g / 5g [D4001]
Dacomitinib	50mg / 250mg [D5450]
Genistein	100mg / 1g [G0272]
Gefitinib	1g / 5g [G0546]
Methyl 2,5-Dihydroxycinnamate (= Erbstatin Analog)	10mg / 100mg [M2520]
Mubritinib	25mg / 100mg [M3058]
Pelitinib	25mg / 100mg [P2529]
PD 158780	10mg / 50mg [P2567]
Tyrphostin AG 1478	25mg [T2944]
Tyrphostin AG 490	20mg / 100mg / 1g [T2962]
Tyrphostin AG 494	20mg / 100mg [A2704]
Tyrphostin A23	25mg / 100mg [T3503]
Tyrphostin AG 528	25mg / 100mg [T3504]
Tyrphostin AG 835	25mg / 100mg [T3540]
Tyrphostin RG 13022	25mg / 100mg [T3575]
Tyrphostin RG 14620	25mg / 100mg [T3576]
WHI-P154	10mg / 50mg [W0013]

FGFR Family Inhibitors

PD-161570	5mg / 25mg [P2531]
PD 173074	10mg / 50mg [P2474]
Regorafenib	25mg / 100mg [R0142]



Other related products are also available.

For more information, please see the product category pages on our website or the product brochure "Receptor Tyrosine Kinase (RTK) Inhibitors".

TCI RTK 

Antioxidants for Research and Experimental Use

N-Acetyl-L-cysteine	25g / 250g	[A0905]	Guaiacol	25g / 500g	[M0121]
L-Ascorbic Acid	25g / 500g	[A0537]	Hesperidin	25g / 100g / 500g	[H0049]
L-Ascorbic Acid Sodium Salt	25g / 500g	[A0539]	Idebenone	1g / 5g / 25g	[I0848]
Bendazac	1g / 5g	[B4223]	Indole-3-carbinol	5g / 25g	[I0496]
Bilirubin	100mg / 1g	[B0460]	Isoliquiritigenin	100mg / 1g	[I0822]
4-Butylresorcinol	1g	[B3773]	Isorhapontigenin	100mg	[I0804]
Butylhydroxytoluene (=BHT)	25g / 500g	[D0228]	Kaempferol Hydrate	100mg / 1g	[K0018]
Butein	100mg / 1g	[B3803]	Lacidipine	1g	[L0276]
Caffeic Acid	5g / 25g	[C0002]	Linoleic Acid	5g / 25g	[L0124]
Caffeic Acid Methyl Ester	200mg / 1g	[M2519]	DL-α-Lipoic Acid	5g / 25g	[L0058]
Caffeic Acid Phenethyl Ester (=CAPE)			(R)-α-Lipoic Acid	5g / 25g / 100g	[L0207]
	25mg / 250mg	[P2088]	Luteolin	1g / 5g	[T2682]
Capsanthin (=Paprika Extract)	25g	[C0781]	Melatonin	1g / 5g	[M1105]
Carnosic Acid	20mg / 100mg	[C2488]	2-Mercaptoethanol	25g / 500g	[M0058]
β-Carotene	1g / 5g	[C0560]	Methylparaben	25g / 500g	[H0216]
(+)-Catechin Hydrate	1g / 10g	[C0705]	Nordihydroguaiaretic Acid	1g / 5g	[D0800]
Chlorogenic Acid	1g / 5g	[C0181]	Oleic Acid	5mL / 25mL	[O0180]
Coenzyme Q₁₀	100mg / 1g	[C1971]	γ-Oryzanol	25g / 250g	[O0172]
trans-p-Coumaric Acid	25g / 100g / 500g	[C0393]	Oxyresveratrol	100mg / 1g	[O0373]
Curcumin (Natural)	1g / 25g	[C0434]	4-(1-Phenylethyl)resorcinol	1g / 5g	[M2754]
Curcumin (Synthetic)	5g / 25g	[C2302]	Phloretin	1g / 5g	[P1966]
Cysteamine	25g / 500g	[A0648]	Piceatannol	100mg / 1g	[P1928]
Cysteamine Hydrochloride	25g / 100g / 500g	[A0296]	Piceid	1g / 5g	[P1878]
L-Cysteine	25g / 100g / 500g	[C0515]	Probucol	5g / 25g	[P2002]
L-Cysteine Hydrochloride Monohydrate			Pyrogallol-5-carboxaldehyde	1g / 5g	[T2650]
	25g / 500g	[C0517]	Pterostilbene	100mg / 1g	[P1924]
Dithioerythritol	5g / 25g	[D1320]	Resveratrol	1g / 5g / 25g	[R0071]
Diosmin	5g / 25g	[D3908]	Rhapontigenin	100mg	[R0089]
Ebselen	25mg / 100mg	[E0946]	Rutin Hydrate	25g	[R0035]
Ellagic Acid Dihydrate	5g / 25g	[E0375]	Sesamin	100mg	[S0495]
Emoxypine	5g	[E0833]	Sesamol	25g	[S0418]
Emoxypine Succinate	1g	[E1069]	L-Selenomethionine	1g / 5g	[S0442]
(-)-Epicatechin Gallate	20mg / 100mg	[E0890]	Se-(Methyl)seleno-L-cysteine	100mg	[S0901]
(-)-Epigallocatechin	10mg / 50mg	[E1084]	Silybin (mixture of Silybin A and Silybin B)		
(-)-Epigallocatechin Gallate Hydrate				5g / 25g	[S0508]
	100mg / 500mg	[E0694]	Sodium Copper Chlorophyllin	25g	[S0271]
Ethoxyquin	25g / 500g	[E0237]	Syringic Acid	25g / 100g / 500g	[G0014]
Eugenol	25mL / 100mL / 500mL	[A0232]	DL-α-Tocopherol	25g / 250g	[T0251]
trans-Ferulic Acid	25g / 250g	[H0267]	DL-α-Tocopherol Acetate	25g / 100g / 500g	[T0252]
Gallic Acid Hydrate	25g / 100g / 500g	[G0011]	D-α-Tocopherol	25g	[T2309]
Gallic Acid n-Octyl Ester	25g / 250g	[G0206]	D-α-Tocopherol Acetate	25g	[T2322]
Gallic Acid Propyl Ester	25g / 500g	[G0018]	Trolox	1g / 5g	[H0726]
Glutathione reduced form	1g / 10g	[G0074]	Uric Acid	25g / 100g / 500g	[U0018]
Gnetol	100mg	[G0371]			

For Laboratory Use, Research Purposes Only.

Sulfated Hyaluronic Acids

Hyaluronic Acid, High-Sulfated

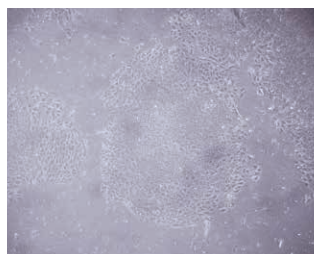
10mg [H1739]

Hyaluronic Acid, Low-Sulfated

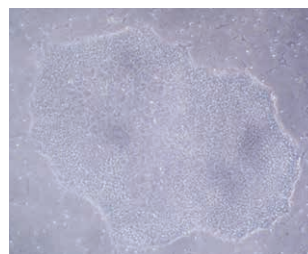
10mg [H1740]

Application

Maintaining the undifferentiated state of hiPS cell



**Differentiated
(control)**



**Undifferentiated
(Hyaluronic Acid, High-Sulfated)**

Sulfated hyaluronic acid maintains the undifferentiated state of hiPS cells under feeder-free and bFGF-free conditions.

These data were kindly provided by Prof. Shoko Nishihara and Dr. Taichi Miura, Soka University.

Reference

Highly sulfated hyaluronic acid maintains human induced pluripotent stem cells under feeder-free and bFGF-free conditions
T. Miura, N. Yuasa, H. Ota, M. Habu, M. Kawano, F. Nakayama, S. Nishihara, *Biochem. Biophys. Res. Commun.* **2019**, 518, 506.
<https://doi.org/10.1016/j.bbrc.2019.08.082>

Cell Proliferation / Viability Assay Reagents

For Cell Counting via Chemiluminescence Measurement

Advantages

- These pre-mixed reagents allow for quick and easy use - just thaw on ice and apply to cells, no need to remove medium. Results in only 10 minutes.
- High-sensitivity, linear ($R^2 > 0.99$) quantification of cell numbers over four orders of magnitude (20 - 10,000 cells per well of 96-well plate).
- Color change (from red to orange) upon addition to culture medium helps prevent confusion when dealing with large numbers of samples.

ATP-Luciferase Cell Viability Assay Solution

10mL [A3519]

ATP-Luciferase Cell Viability Assay Solution (1.0mL×10)

1set [A3495]

Cell Proliferation / Viability Assay Reagents

For Cell Counting via Absorbance Measurement

MTT is a type of tetrazolium salt that is converted into formazan when taken up by living cells. This formazan can be dissolved in DMSO and the absorbance at 540 nm can be used to estimate the relative number of cells.

MTT [for Biochemical Research]

200mg / 1g [M3297]

MTT Solution [for Cell proliferation assay] (1mLx5)

1set [M3353]

For Cell Counting via Fluorescence Measurement

Resazurin can be used to determine relative cell number, useful in the quantification of such phenomena as cell proliferation, viability, and cytotoxicity. When added to viable cells, blue, non-fluorescent resazurin undergoes a conversion to a highly fluorescent derivative. Both resazurin and its derivative are water soluble and have low toxicity, making it simple to handle and eliminating the washing, fixing, and extraction steps required for other commonly used cell proliferation assays.

Resazurin (Ready-to-use solution) [for Cell proliferation assay]

25mL [R0195]

Nuclear / Cytoplasmic Fractionation Kit

This product is a kit for convenient fractionation of nuclear and cytoplasmic proteins from cultured mammalian cells. By using the three reagents included, the quick collection of each fraction can be achieved. The extracted proteins can be used directly in downstream applications such as Western Blotting.

Nuclear / Cytoplasmic Fractionation Kit

1kit [N1208]

Antimicrobial Research Regents

Ampicillin Trihydrate	5g / 25g [A2092]	Penicillin G Sodium Salt	1g / 5g [P1770]
Amoxicillin Trihydrate	5g / 25g [A2099]	Penicillin G Potassium Salt	25g [P1772]
Cloxacillin Sodium Salt Monohydrate	1g / 5g [C2244]	Piperacillin Sodium Salt	1g [P1774]
Oxacillin Sodium Salt Monohydrate	1g / 5g / 25g [O0353]	Sultamicillin Tosylate Dihydrate	250mg / 1g [U0097]

Antiviral Research Regents

Amantadine Hydrochloride	25g / 250g [A0588]	Adefovir Dipivoxil	100mg / 1g [A2414]
Acyclovir	1g / 5g / 25g [A1915]	Abacavir	1g / 5g [A2694]
Azidothymidine	1g / 5g [A2052]	Triacetylganciclovir	1g [A3228]
Decitabine	20mg / 100mg [A2232]	Arbidol Hydrochloride	25mg / 100mg [A3402]
Amantadine	5g / 25g [A2318]	Atazanavir Sulfate	100mg / 500mg [A3411]

Antitumor Research Regents

Antitumor Alkylating Regents

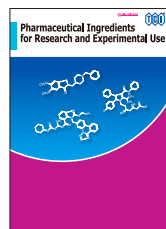
Busulfan	25g [B1022]
Cyclophosphamide Monohydrate	5g / 25g [C2236]
Carmustine	100mg [C2634]
Chlorambucil	200mg / 1g [C2939]
Dacarbazine	1g / 5g [D3634]
Ifosfamide	1g [I0713]
Lomustine	50mg / 200mg [L0251]
Nimustine Hydrochloride	1g [N0821]
Procarbazine Hydrochloride	100mg / 500mg [P2550]
Temozolomide	500mg / 5g [T2744]

Platinumcontaining Antitumor Regents

Carboplatin	100mg / 1g [C2043]
Cisplatin	100mg / 1g [D3371]
Oxaliplatin	100mg [O0372]

Antitumor Antimetabolites

Aminopterin	25mg / 100mg [A0410]
Allopurinol	25g [A0907]
Ladakamycin	100mg / 1g [A2033]
Decitabine	20mg / 100mg [A2232]
Acadesine	50mg [A2528]
Ara-G	10mg / 50mg [A2739]
CPI 613	5mg / 25mg [B5368]
Cytarabine	1g / 5g [C2035]
Ancitabine Hydrochloride	1g / 5g [C2207]
Calcium Folate	1g / 5g [C2235]



Other antitumor ingredients are also available.

For more information, please see the product category pages on our website or the product brochure "Pharmaceutical Research Regents for Experimental Use".

TCI antitumor research

Antihypertensive Research Regents

Atenolol	10g [A1414]	Benazepril Hydrochloride	1g / 5g [B3611]
Amlodipine Besylate	1g / 5g [A2353]	Bisoprolol Hemifumarate	200mg [B3994]
Azelnidipine	1g / 5g [A2433]	Betaxolol Hydrochloride	50mg / 200mg [B4474]
Azilsartan	200mg / 1g [A2601]	Bosentan Monohydrate	25mg / 100mg [B5118]
Ambrisentan	20mg / 100mg [A2966]	Bevantolol Hydrochloride	250mg / 1g [B5372]

Antilipemic Research Regents

Atorvastatin Calcium Salt Trihydrate	1g / 5g [A2476]	Clinofibrate	200mg / 1g [C3100]
Atorvastatin Lactone	25mg / 100mg [A3114]	EPA Ethyl Ester	200mg [E0442]
Bezafibrate	5g / 25g [B3346]	EPA Ethyl Ester (stabilized with Tocopherols)	25g [E0853]
Clofibrate	25g / 500g [C0941]	Etofibrate	50mg / 250mg [E1359]
Ciprofibrate	1g / 5g [C2667]	Ezetimibe	1g / 5g [E1449]

Antithrombotic Research Regents

Antiplatelet Research Regents

Acetylsalicylic Acid	25g / 500g [A2262]
(S)-(+)-Clopidogrel Sulfate	1g / 5g [C2556]
Cilostazol	1g / 5g [C2587]
MY-5445	20mg / 100mg [C2884]
DHA Ethyl Ester	100mg [D2195]

Anticoagulant Research Regents

Argatroban Monohydrate	25mg [A2705]
Acenocoumarol	50mg / 250mg / 1g [A3186]
Gabexate Mesylate	1g [G0464]
Heparin Sodium Salt from Hog intestine	100mg / 1g [H0393]
Nafamostat Mesylate	20mg / 100mg [N0959]

Antidiabetic Research Regents

Aminoguanidine Hydrochloride	25g / 100g / 500g [A1129]
Acarbose	1g / 5g [A2485]
Buformin Hydrochloride	50mg / 250mg [B6007]
Calcium Dobesilate Hydrate	1g [C2789]
Epalrestat	1g / 5g [E0906]

Neurotransmitter Research Regents

Acetylcholine Chloride	25g / 500g [A0084]
GABA	25g / 100g / 500g [A0282]
Atropine Sulfate Monohydrate	5g / 25g [A0550]
Amantadine Hydrochloride	25g / 250g [A0588]
Allobarbitol	25g [A0739]



We also offer antihypertensive, antihyperlipidemic, antithrombotic, antidiabetic, and neurotransmitter-acting research regents.

For more information, please refer to the product category page on our website or the product brochure "Pharmaceutical Research Regents for Experimental Use".



Anti-inflammatory Research Regents

Betamethasone	1g / 5g	[B1837]
Betamethasone 17,21-Dipropionate	1g / 5g	[B3166]
Budesonide	200mg / 1g	[B3909]
Betamethasone 21-Phosphate Disodium Salt	1g	[B4110]
Cortisone Acetate	1g / 5g / 25g	[C0389]
Clobetasol 17-Propionate	1g / 5g	[C2612]
Ciclesonide	10mg / 50mg	[C3701]
Dexamethasone	1g	[D1961]
Prednisolone 21-Phosphate Disodium Salt	5g	[D3918]
Deflazacort	1g	[D4523]

Anti-allergic Research Regents

Antazoline Hydrochloride	25g	[A2132]
Azelastine Hydrochloride	100mg / 1g	[A2340]
Acrivastine	20mg / 100mg	[A2764]
Alimemazine Tartrate	100mg / 1g / 5g	[A2813]
Alcaftadine	25mg	[A3237]
Betahistine Methanesulfonate	25g	[B1424]
Brompheniramine Maleate	25g	[B5167]
Bilastine	250mg / 1g	[B5392]
Bepotastine Besilate	25mg / 100mg	[B5943]
Chlorpheniramine Maleate	25g	[C0873]

Immunosuppressant Research Regents

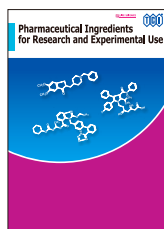
Mesalazine	25g / 500g	[A0317]
Azathioprine	5g / 25g	[A2069]
Cyclophosphamide Monohydrate	5g / 25g	[C2236]
Cyclosporin A	100mg / 1g	[C2408]
Prednisolone 21-Phosphate Disodium Salt	5g	[D3918]
Dimethyl Fumarate	25g / 500g	[F0069]
FTY 720	200mg / 1g	[F1018]
Iguratimod	25mg / 250mg	[I0945]
Leflunomide	200mg / 1g	[L0250]
Lobenzarit Disodium Salt	25mg / 100mg	[L0278]

Immunostimulant Research Regents

ASA-404	50mg / 250mg	[D5235]
Imiquimod	100mg / 1g	[I0747]
Inosine Pranobex	100mg / 1g	[I1037]
Linomide	10mg	[L0270]
Pidotimod	5g / 25g	[P2147]
Plerixafor	50mg / 250mg	[P2678]
Resiquimod	25mg / 100mg	[R0197]
AMD-3100 Octahydrochloride	25mg / 100mg	[P2620]

Anti-rheumatoid Arthritis Research Regents

Mesalazine	25g / 500g	[A0317]	Hydroxychloroquine Sulfate	5g / 25g	[H1306]
Azathioprine	5g / 25g	[A2069]	Iguratimod	25mg / 250mg	[I0945]
Actarit	100mg	[A2793]	Leflunomide	200mg / 1g	[L0250]
Cyclophosphamide Monohydrate	5g / 25g	[C2236]	Lobenzarit Disodium Salt	25mg / 100mg	[L0278]
Cyclosporin A	100mg / 1g	[C2408]	Methotrexate Hydrate	1g / 5g	[M1664]



We also offer other anti-inflammatory, immunosuppressant, anti-rheumatoid arthritis, anti-allergic, and immunostimulant research regents.

For details, please refer to the product category page on our website or the product brochure "Pharmaceutical Research Regents for Experimental Use".



Anti-osteoporosis Research Regents

Bone Resorption Inhibitors

Alendronic Acid	5g / 25g [A2120]	Minodronate Monohydrate	25mg [M2360]
Alendronate Sodium Trihydrate	5g / 25g [A2456]	Sodium Ibandronate	1g / 5g [S0877]
Disodium Pamidronate	100mg / 1g [D3921]	Zoledronic Acid Monohydrate	1g / 5g [Z0031]
Disodium Etidronate Hydrate	5g / 25g [D4159]	Calcitonin Salmon	5mg / 25mg [C3597]
Disodium Clodronate Tetrahydrate	1g / 5g [D4160]	20(R)-Ginsenoside Rh2	5mg / 25mg [G0567]
Disodium Tiludronate	25mg [D4167]		
Risedronic Acid Monosodium Salt Hemipentahydrate	1g [M2289]		

Dual Action Bone Agent

Strontium Ranelate Hydrate	1g [S0938]
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Selective Estrogen Receptor Modulators

Lasofloxifene Tartrate	10mg / 50mg [L0336]
Ospemifene	100mg / 1g [O0441]
Raloxifene Hydrochloride	1g / 5g [R0109]
Tamoxifen Citrate	1g / 5g [T2510]
Toremifene Citrate	1g / 5g [T2832]

Flavonoids

Hesperidin	25g / 100g / 500g [H0049]
Ipriflavone	5g / 25g [I0669]

Estrogens

Diethylstilbestrol	1g / 5g [D0526]
β-Estradiol	1g / 5g / 25g [E0025]
Estrone	1g / 5g [E0026]
Estriol	100mg / 1g [E0218]
β-Estradiol 17-Valerate	1g / 5g [E0876]
Ethinodiol Diacetate	1g / 5g [E1315]
Nandrolone	100mg [N0777]

Vitamins

Alfacalcidol	10mg / 50mg [A3125]
Calciferol	1g [C0005]
Cholecalciferol	1g [C0314]
Calcitriol	1mg [C3078]
Ergosterol	5g / 25g [E0018]

Leucine-Rich Repeat Kinase 2 (LRRK2) Inhibitors

SP 600125	25mg [A2548]	5-Iodotubercidin	200mg [I1156]
Arcyriaflavin A	20mg [A3497]	Sorafenib	500mg [O0599]
Bisindolylmaleimide I	5mg / 25mg [B5781]	LDN-22684	1g / 5g [P1973]
GW-5074	100mg [G0609]	Ro 31-8220 Mesylate	10mg [R0257]
Indirubin-3'-monoxime	50mg [I1118]	Staurosporine	10mg [T4000]

Imaging Agent Research Regents

DOTA and the Derivatives for MRI

DOTA	200mg / 1g [T1875]
Tri-tert-butyl 1,4,7,10-Tetraazacyclododecane1,4,7-triacetate	200mg [T2541]
Tri-tert-butyl 1,4,7,10-Tetraazacyclododecane1,4,7,10-tetraacetate	100mg / 1g [T2642]
Tetraethyl 1,4,8,11-Tetraazacyclotetradecane1,4,8,11-tetraacetate	200mg [T2540]

Iodine-containing Contrast Agents for X-ray

Acetrizic Acid	1g / 5g [A0858]
Diatrizic Acid	25g [D1462]
Metrizic Acid	5g / 25g [M1363]
Iopanoic Acid	5g / 25g [I0300]
Iohexol (mixture of isomers)	5g / 25g [I0903]

PET Tracer Precursors

TATM	100mg [T2307]
2-Deoxy-2-fluoro-D-glucose	100mg [D3023]
2,2'-O-Anhydro-5-methyluridine	1g [A2431]
2'-Deoxy-5-fluorouridine	100mg / 500mg / 1g [D2235]
trans-4-Fluoro-L-proline	50mg [F0818]

Fluorescent Imaging Agents for Funduscopy

Fluorescein	25g / 100g / 500g [F0095]
Indocyanine Green	100mg / 1g [I0535]

For Laboratory Use, Research Purposes Only. We can not provide any radioisotope-labeled compound.

Reagents for Preparing Animal Disease Models

For Carcinogenic Models

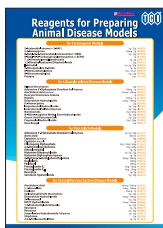
2-Acetamidofluorene (= 2-AAF)	5g / 25g [A0076]
3,4-Benzopyrene	100mg / 1g [B0085]
N-Butyl-N-(4-hydroxybutyl)nitrosamine (= BBN)	5g / 25g [B0938]
N-Butyl-N-(3-carboxypropyl)nitrosamine (= BCPN)	1g [B3185]
7,12-Dimethylbenz[<i>a</i>]anthracene	1g / 5g [D0677]
1,2-Dimethylhydrazine Dihydrochloride	25g [D0741]
β-Estradiol	1g / 5g / 25g [E0025]
4-Nitroquinoline N-Oxide	1g / 5g [N0250]
N-Nitrosodibutylamine	5mL / 25mL [N0375]
N-Nitrosomorpholine	5g / 25g [N0466]
Pristane	5mL [T0149]

For Life-style related Disease Models

Adenosine 5'-Diphosphate Disodium Salt	100mg / 1g [A0626]
Arachidonic Acid	100mg / 500mg [A0781]
Deoxycorticosterone Acetate	1g [D0047]
Digoxin	100mg / 1g [D1828]
Doxorubicin Hydrochloride	25mg / 100mg [D4193]
DL-Homocystine	25g [H0160]
Isoproterenol Hydrochloride	5g / 25g [I0260]
Isoproterenol Sulfate Dihydrate	5g / 25g [I0261]
Nicotinamide	25g / 500g [N0078]
N^ω-Nitro-L-arginine Methyl Ester Hydrochloride	5g / 25g [N0661]
Oxonic Acid Potassium Salt	5g / 25g [O0164]
Propranolol Hydrochloride	25g / 250g [P0995]
Rose Bengal	25g [R0041]

For Pain and Itch Models

Adenosine 5'-Triphosphate Disodium Salt Hydrate	1g / 5g / 25g [A0157]
Acetic Acid	300mL [A2035]
Capsaicin (Synthetic)	10g [M0900]
Capsaicin (Natural)	1g [M1149]
Chloroquine Diphosphate	25g / 100g / 500g [C2301]
2,4-Dinitrofluorobenzene	25g / 500g [D0835]
Ethinylestradiol	1g / 5g [E0037]
Histamine Dihydrochloride	1g / 5g / 25g [H0146]
Histamine Diphosphate	1g / 5g / 25g [H0147]
4-Methoxy-N-methylphenethylamine	20mg / 200mg [M2551]
Oxaliplatin	100mg [O0372]
Paclitaxel	100mg [P1632]
Prostaglandin E₂	1mg / 10mg [P1884]
Prostaglandin F_{2α}	1mg / 10mg [P1885]
Reserpine	1g / 5g [R0007]
Serotonin Hydrochloride	5g [S0370]



Other reagents for preparing animal disease models are also available.

For more information, please refer to the product category page of our website or the product brochure "Preparing Animal Disease Models".



Cosmetic Research Regents for Experimental Use

Allantoin	25g / 500g [A0211]	Hinokitiol	1g / 5g [H0142]
Arbutin	5g / 25g [A0522]	Hyaluronic Acid Sodium Salt from Cockscomb	
4-Amino-1-butanol	5g / 25g [A1013]		100mg / 1g [H0603]
Asiatic Acid	200mg [A2475]	1,2,6-Hexanetriol	5g / 25g [H1069]
α-Arbutin	5g / 25g [A3284]	Kojic Acid	25g / 500g [K0010]
Avobenzone	25g / 100g [B3382]	Kojic Acid Dipalmitate	5g / 25g [K0050]
4-Butylresorcinol	1g [B3773]	Laurocapram	5mL / 25mL [L0317]
Chondroitin Sulfate Sodium Salt	25g / 100g [C0335]	Octyl 4-Methoxycinnamate	
Chelidamic Acid Monohydrate	5g / 25g [C0821]		25mL / 100mL / 500mL [M1082]
Octyl 2-Cyano-3,3-diphenylacrylate		4-(1-Phenylethyl)resorcinol	1g / 5g [M2754]
	25g / 100g / 500g [C0968]	γ-Oryzanol	25g / 250g [O0172]
Amidol (>97.0%)	25g / 500g [D0080]	Pentaacetyl-β-D-glucose	100g / 500g [P0028]
Amidol (>98.0%)	25g [D0110]	Phytosphingosine	1g / 5g [P1765]
Ethylhexyl Triazone	1g / 5g [E1312]	Pongamol	250mg / 1g [P2790]
D-(+)-Glucosamine Hydrochloride	25g / 500g [G0044]	Rhododendrol	1g [R0121]
n-Octyl Gallate	25g / 250g [G0206]	Sodium DL-Lactate (60% in Water)	500g [S0928]
D-Glucamine	5g / 25g [G0252]	Stearyl Glycyrrhetinate	5g / 25g [S0988]
1,2,6-Hexanetriol	25g / 250g [H0104]		

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Vitamins

Vitamin A and Its Derivatives

Retinoic Acid	1g / 5g	[R0064]
13- <i>cis</i> -Retinoic Acid	100mg / 1g	[R0088]
β -Carotene	1g / 5g	[C0560]
Fenretinide (= 4-HPR)	10mg / 100mg	[H1464]
Tazarotene	10mg / 100mg	[T3108]
Bexarotene	100mg	[B4798]
AM580	5mg / 25mg / 100mg	[A3082]
Acitretin	50mg / 250mg	[A3097]
Etretinate	50mg / 250mg	[E1293]
Arotinoid Acid	5mg / 25mg	[T3842]

Vitamin B₁ and Its Derivatives

Thiamine Hydrochloride Hydrate	25g / 100g / 500g	[T0181]
Thiamine Nitrate	25g / 100g / 500g	[T0182]
Thiamine Disulfide	25g	[T0176]
Thiamine Pyrophosphate Chloride (= Cocarboxylase)	5g	[T0183]
Benfotiamine	5g / 25g	[B4711]
Sulbutiamine	5g / 25g	[S0964]

Vitamin B₂ and Its Derivatives

Riboflavi	25g / 100g / 500g	[R0020]
Riboflavin Tetrabutryate	5g / 25g	[R0055]
Flavin Adenine Dinucleotide Disodium Salt	100mg / 1g	[F0014]
Lumichrome	100mg	[D1066]

Vitamin B₃ and Its Derivatives

Nicotinic Acid	25g / 500g	[N0082]
Nicotinamide	25g / 500g	[N0078]
β -Nicotinamide Mononucleotide	50mg / 250mg	[N1123]
β -Nicotinamide Adenine Dinucleotide Phosphate Tetrasodium Salt reduced form (= β -NADPH)	100mg	[T0521]
β -Nicotinamide Adenine Dinucleotide Phosphate Sodium Salt Hydrate, oxidized form (= β -NADP)	100mg / 1g	[C0379]
β -Nicotinamide Adenine Dinucleotide Phosphate (= β -NADP)	100mg	[N0943]
β -Nicotinamide Adenine Dinucleotide Disodium Salt Hydrate, reduced form (= β -NADH)	100mg / 1g / 5g	[D0920]
β -Nicotinamide Adenine Dinucleotide oxidized form (= β -NAD)	1g / 5g	[D0919]
Acipimox	1g / 5g	[M2053]
Methyl Nicotinate	25g / 500g	[N0086]
N-Nicotinoylglycine	5g / 25g	[N0092]
Niceritrol	25mg / 100mg	[N0974]

Vitamin B₅ and Its Derivatives

D-Pantothenic Acid Sodium Salt	25g / 250g	[P0013]
D-Pantothenic Acid Calcium Salt	25g / 100g / 500g	[P0012]
D-Panthenol	25g / 500g	[P0692]
DL-Panthenol	25g / 500g	[P1318]

Vitamin B₆ and Its Derivatives

Pyridoxine Hydrochloride	25g / 100g / 500g	[P0561]
Pyridoxal Hydrochloride	1g / 5g / 25g	[P0559]
Pyridoxal 5-Phosphate Monohydrate	1g / 5g / 25g	[C0377]
4-Deoxy pyridoxine Hydrochloride	100mg	[D0053]
Pyridoxine 3,4-Dipalmitate	5g / 25g	[P1395]
Pyridoxine Dicaprylate	5g / 25g	[P2208]
Pyritinol	5g / 25g	[P2250]
Pyridoxamine Dihydrochloride	1g / 5g / 25g	[P2688]

Vitamin B₇

Biotin	100mg / 1g / 5g	[B0463]
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Vitamin B₉ and Its Derivatives

Folic Acid	25g	[F0043]
Folinic Acid Calcium Salt	1g / 5g	[C2235]
Levomefolic Acid	50mg / 250mg	[L0335]

Vitamin B₁₂ and Its Derivatives

Cyanocobalamin	100mg / 1g	[C0449]
Hydroxocobalamin Acetate	1g / 5g	[H1542]
Methylcobalamin Hydrate	1g	[M2742]

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Sweetener Research Regents for Experimental Use

Artificial Sweetener Research Regents for Experimental Use

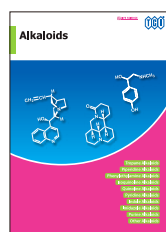
Aspartame	1g / 25g [A0997]	Cyclamic Acid Sodium Salt	25g / 500g [C0487]
Acesulfame K	25g / 100g / 500g [A1490]	Maltitol	25g / 500g [M0601]
Advantame	250mg [A3471]	Neotame	1g / 5g / 25g [N1112]
Saccharin Sodium Salt Dihydrate	25g / 500g [B0131]	Sucralose	5g / 25g / 100g [S0839]

Natural Artificial Sweetener Research Regents for Experimental Use

N-Acetyl-D-glucosamine	25g / 100g / 500g [A0092]	D-(-)-Ribose	25g / 250g [R0025]
meso-Erythritol	25g / 100g / 500g [E0021]	Rebaudioside A	5g / 25g [R0095]
Glycyrrhizin	1g / 25g [G0150]	Rebaudioside B	25mg [R0248]
Glycyrrhizin Monoammonium Salt	1g / 25g [G0151]	D-Sorbitol	25g / 500g [S0065]
Glycyrrhizin Trisodium Salt	25g [G0217]	Stevioside	25g [S0594]
Glycyrrhizin Dipotassium Salt	25g [G0270]	D-(+)-Trehalose Dihydrate	25g / 500g [T0331]
Isosteviol	100mg / 500mg [I1069]	D-(+)-Trehalose Anhydrous	5g / 25g [T0832]
Palatinose Hydrate	25g / 500g [P1234]	Thaumatococin	100mg / 1g [T1144]
		Xylitol	25g / 500g [X0018]

Alkaloids

Atropine	5g / 25g [A0754]	Betanin (Red Beet extract diluted with Dextrin)	25g / 100g [B0397]
Atropine Sulfate Monohydrate	5g / 25g [A0550]	(+)-Bicuculline	25mg / 100mg [B1890]
Chelerythrine Chloride	25mg / 100mg [C3584]	Brucine Hydrate	25g [B0670]
Berberine Chloride Hydrate	5g / 25g [B0450]	Brucine Anhydrous	25g [B0946]
Berberine Sulfate	5g / 25g [B0451]		
Lycorine Hydrochloride Monohydrate	25mg / 100mg [L0319]		



Other alkaloids are also available.

For more information, please see the product category pages on our website or the product brochure "Alkaloids".

TCI alkaloids



Steroids

Astragaloside IV	250mg / 1g [A3305]	Digitonin	100mg [D0540]
Cucurbitacin B	5mg / 25mg [C3442]	Sarsasapogenin	25mg / 100mg [A3192]
(20S)-Protopanaxadiol	25mg / 100mg [P2651]	Digitoxigenin	10mg [D0541]
Cycloastragenol	25mg / 100mg [C3469]	Digitoxin	100mg [D0542]
Peiminine	10mg / 50mg [P2609]	Digoxin	100mg / 1g [D1828]

Terpenoids

Abietic Acid	25g / 500g [A0001]	Bilobalide	10mg / 50mg [B4388]
(-)-Ambroxide	5g/ 25g [A2472]	(±)-Camphor	25g / 500g [C0011]
Asiatic Acid	200mg [A2475]	(+)-Camphor	25g / 500g [C0010]
Betulinic Acid	100mg / 1g [B2836]	Cantharidin	25mg / 100mg [C0019]
Betulinol	100mg [B0803]	Carnosic Acid	20mg / 100mg [C3477]

Phenylpropanoids

Aegeline	5g / 25g [A3170]	Methyl Caffaeate	200mg / 1g [M2519]
Angelicin	25mg [A2573]	Phenethyl Caffaeate	25mg / 250mg [P2088]
trans-Anethole	25g / 100g / 500g [P0494]	Chicoric Acid	10mg / 50mg [C3450]
Bergapten	1g / 5g [B2840]	Chlorogenic Acid	1g / 5g [C0181]
Caffeic Acid	5g / 25g [C0002]	trans-Cinnamaldehyde	25mL / 500mL [C0352]

Polyphenols

Stilbenoids

Combretastatin A4	250mg [C2520]	Piceid	1g / 5g [P1878]
Gnetol	100mg [G0371]	Pinostilbene	100mg [P1927]
Isorhapontigenin	100mg [I0804]	Pterostilbene	100mg / 1g [P1924]
Oxyresveratrol	100mg / 1g [O0373]	Resveratrol	1g / 5g / 25g [R0071]
Piceatannol	100mg / 1g [P1928]	Rhapontigenin	100mg [R0089]

Flavonoids

Acacetin	25mg / 100mg [A3013]	(+)-Catechin Hydrate	1g / 10g [C0705]
Apigenin	100mg [A1514]	(+)-Taxifolin	200mg / 1g [T3666]
Baicalein	1g / 5g [T2721]	(-)-Epicatechin	1g / 5g [E1226]
Galangin	25mg / 100mg [G0370]	Chrysin	25g [C1652]
Baicalin	25g [B2835]	Dihydromyricetin	200mg / 1g [D5464]

Isoflavonoids

7-Methoxy-5-methylisoflavone	1g / 5g [M3190]	Genistein	100mg / 1g [G0272]
Biochanin A	200mg / 1g / 5g [B4098]	Irisflorentin	10mg / 50mg [I1063]
Daidzein	1g [D2668]	Ononin	10mg [O0405]
Daidzin	25mg [D3920]	Genistin	25mg / 100mg [G0358]
Formononetin	1g / 5g [F0868]	Tectoridin	10mg / 50mg [T3724]

Polysaccharides

Chondroitin Sulfate Sodium Salt	25g / 100g	[C0335]	κ-Carrageenan	25g / 500g	[C1804]
Dermatan Sulfate Sodium Salt	20mg / 100mg	[D3672]	ι-Carrageenan	25g / 500g	[C1805]
Hyaluronic Acid from Cockscomb	1g	[H0595]	λ-Carrageenan (Low-viscosity)	1g / 5g	[C2871]
Hyaluronic Acid Sodium Salt from Cockscomb	100mg / 1g	[H0603]	λ-Carrageenan (High-viscosity)	25g / 500g	[C3313]
Hyaluronic Acid Potassium Salt from Cockscomb	1g	[H0652]	Dextran 40 (Mw.=ca. 40000)	25g / 100g / 500g	[D1448]
Hyaluronic Acid from Bacteria	1g	[H1807]	Dextran 70 (Mw.=ca. 70000)	25g / 100g / 500g	[D1449]
Hyaluronic Acid Sodium Salt from Bacteria	100mg / 1g	[H1791]	Dextrin	100g / 500g	[D4657]
Hyaluronic Acid Potassium Salt from Bacteria	1g	[H1808]	Dextrin (Soluble fiber)	100g / 500g	[D5658]
Amylopectin (Amylose free), from Waxy Corn	25g / 500g	[A0456]	Glucan from Black Yeast	1g / 5g	[G0331]
Alginate Acid	25g / 500g	[A0733]	Guar Gum	25g / 500g	[G0478]
Alginate Acid Calcium Salt	25g / 500g	[A0738]	Inulin (by Enzymatic synthesis)	25g / 500g	[I1067]
			Pectin from Citrus	25g / 500g	[P0024]
			Pullulan	25g / 100g / 500g	[P0978]
			Tamarind Gum from Tamarind seed, Polysaccharide	25g / 500g	[T0909]
			Xanthan Gum	25g / 100g / 500g	[X0048]
			Xylan from Corn Core	25g / 100g	[X0078]

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Plant Hormones

Auxins

IAA	5g / 25g	[I0022]
K-IAA	1g / 25g	[I0023]
IAA Methyl Ester	5g / 25g	[M2605]
IAA Ethyl Ester	5g / 25g	[E0878]
IAN	1g / 25g	[I0024]
IBA	5g / 25g	[I0026]
IPA	5g / 25g	[I0032]
NAA	25g / 500g	[N0005]
Na-NAA	25g / 500g	[N0007]
K-NAA	25g	[N0006]
1-Naphthaleneacetamide	25g / 500g	[N0624]
NOA	25g / 500g	[N0045]
4-BPA	5g / 25g	[B2746]
4-CPA	25g / 500g	[C0250]
PCIB	25g	[C0940]
MCPA	25g / 500g	[C0206]
MCPB Ethyl Ester	100mg / 1g	[E1149]
2,4-D	25g / 500g	[D0396]
Na-2,4-D Monohydrate	25g / 500g	[D1319]
2,4-D Meptyl Ester	100mg / 1g	[O0518]
2,4,5-T Potassium Salt	25g / 500g	[T1509]
TIBA	5g / 25g	[T0451]
Dichlorprop	25g	[D1942]
Dicamba	200mg	[D4800]
cvxIAA	10mg / 50mg	[M3141]
5-Adamantyl-IAA	10mg / 50mg	[A3390]

Cytokinins

Adenine	25g / 250g	[A0149]
Adenine Sulfate Dihydrate	25g / 100g	[A0151]
N ⁶ -Benzyladenine	5g / 25g	[B1088]
Kinetin	1g / 5g	[K0009]
<i>trans</i> -Zeatin	100mg	[Z0012]
Carbanilide	25g / 100g / 500g	[C0031]
Forchlorfenuron	5g	[C0926]

Abscisic Acid

(S)-(+)-Abscisic Acid	100mg	[A1698]
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Gibberellin

Gibberellin A ₃	100mg / 1g / 5g	[G0029]
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Ethylene

Ethephon	1g / 5g	[C1456]
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Jasmonates

Jasmonic Acid (mixture of isomers)	1g / 5g	[J0004]
Methyl Jasmonate (mixture of isomers)	5g / 25g	[M1068]
Dihydrojasmonic Acid	1g / 5g	[D3225]
Methyl Dihydrojasmonate (<i>cis</i> - and <i>trans</i> - mixture)	25mL / 100mL	[D1431]

Others

Putrescine	25g / 400g	[D0239]
Cadaverine	5mL / 25mL	[D0108]
1-Decanol	25mL / 500mL	[D0031]
1-Triacontanol	100mg / 1g	[T1049]
L-(+)-Lysine	5g / 25g	[L0129]
L-Homoproline	1g / 5g	[P1404]
5-Aminolevulinic Acid Hydrochloride	100mg / 1g	[A0325]
Phloroglucinol Anhydrous	25g / 250g	[P0249]
Benzoic Acid	25g / 500g	[B2635]
2-Hydroxybenzoic Acid	25g / 500g	[H0206]
Choline Chloride	25g / 500g	[C0329]
Chlorocholine Chloride	25g / 500g	[C0172]
Colchicine	500mg / 5g	[C0380]
Traumatic Acid	100mg	[D0029]
Dikegulac Monohydrate	5g	[D2191]
Brassinazole	10mg / 100mg	[B2829]
Daminozide	5g / 25g	[D4015]
Mepiquat Chloride	1g / 5g	[D4016]
<i>o</i> -Sulfobenzimide	25g / 500g	[B0004]
Maleic Hydrazide	25g / 500g	[M0015]
Nicotinic Acid	25g / 500g	[N0082]
Nicotinamide	25g / 500g	[N0078]
Ancymidol	25mg / 100mg	[A2877]
Isoxadifen-ethyl	5g / 25g	[I0956]
AMI-331 Hydrochloride	5mg / 25mg	[A3352]
Bikinin	25mg	[B4826]
Cyclanilide	1g	[C3595]
1 <i>H</i> -Imidazole-4-carboxamide	250mg	[I1101]
Paclbutrazol	1g / 5g	[P2299]
Sphynolactone-7	5mg / 25mg	[P2745]
TIBA	5g / 25g	[T0451]
Xylemin Dihydrochloride	250mg / 1g	[X0080]

Glyco-enhancer of Plant Fertilization AMOR

Advantages

- Terminal disaccharide structure of arabinogalactan
- Pistil-derived sugar chain which enhances fertilizing capacity of the pollen tube
- Enhances the activity and efficiency of plant fertilization
- Prepared by chemical synthesis

AMOR

1mg / 5mg [M3044]

This product is commercialized under instruction by Prof. Tetsuya Higashiyama.

Agrochemical Research Regents for Experimental Use

Herbicide Research Regents

Atrazine	5g / 25g	[A1650]
Bentranil	250mg / 1g	[B5739]
Chlorpropham	1g / 25g	[C2555]
Clodinafop-propargyl	5g / 25g	[C3552]
Cloquintocet-mexyl	1g	[C2682]
Cybutryne	5g / 25g	[I0842]
Cyhalofop Butyl	1g / 25g	[C2417]
1-Decanol	25mL / 500mL	[D0031]
Dicamba	200mg	[D4800]
Diflufenican	1g / 5g / 25g	[D4108]
Diuron	25g / 500g	[D1328]
Fenclorim	1g / 5g	[F0851]
Fluometuron	5g / 25g	[D3773]
Flurenol	25g	[H1004]
Fluroxypyr Meptyl	5g / 25g	[F1213]
Halosulfuron-methyl	1g / 5g	[H1374]
Hexazinone	5g / 25g	[H1686]
Isoproturon	1g / 5g / 25g	[I0843]
Isoxadifen-ethyl	5g / 25g	[I0956]
MCPA	25g / 500g	[C0206]
MCPA Methyl Ester	1g / 25g	[C0598]
MCPB Ethyl Ester	100mg / 1g	[E1149]
Mefenpyr-diethyl	1g / 5g	[M2604]
Metamitron	5g / 25g	[M2388]
Methabenzthiazuron	100mg	[M2334]
Monuron	25g / 500g	[C0254]
Nitrofen	5g	[D3912]
Pendimethalin	1g / 5g / 25g	[P1964]
Pretilachlor	5g / 25g	[P1967]
Propyzamide	1g / 5g	[P2374]
Quinoclamine	25g / 500g	[A1288]
Tebuthiuron	5g / 25g	[T3647]
Thifensulfuron-methyl	1g / 5g	[T3166]
Tralkoxydim	200mg / 1g	[T2916]
Triclopyr	5g / 25g	[T3742]

Fungicide Research Regents

Boscalid	100mg / 1g	[B4038]
Bromochlorophen	25g	[M1940]
Captan	5g / 25g	[C2059]
Carboxin	5g / 25g	[C3482]
Chloramine T Trihydrate	25g / 500g	[C0076]
Chlorothalonil	25g	[T0895]
<i>trans</i> -Cinnamaldehyde	25mL / 500mL	[C0352]
Cymoxanil	5g / 25g	[C2657]
Davicol	1g / 5g	[T3670]
Dichloroglyoxime	1g / 5g	[D5562]
Fenaminosulf	5g	[D1394]
Fenhexamid	200mg / 1g	[F0967]
Fluazinam	1g	[F0869]
Octhilinone	5g / 25g	[O0343]
Oxine-Copper	25g	[B1677]
Prochloraz	1g / 5g	[P2137]
Quinoxifen	200mg	[Q0093]
Streptomycin Sulfate	25g / 500g	[S0585]
Tebuconazole	1g / 5g	[T2988]
Tecnazene	25g / 500g	[T0624]
Thiabendazole	25g / 250g	[T0830]
Thifluzamide	250mg / 1g	[T3648]
Ziram	25g / 500g	[D0717]

Pesticide Research Regents

Amitraz	50mg / 1g	[A2608]
Butopyronoxyl	25g / 500g	[D0550]
Cyromazine	5g / 25g	[C2366]
Deltamethrin	100mg / 1g	[D4775]
Dinotefuran	1g / 5g	[D5560]
Fenaminosulf	5g	[D1394]
Fenpyroximate	100mg / 1g	[F1195]
Fipronil	1g / 5g	[F0822]
Hymexazol	5g / 25g	[H1348]
Methoxychlor	25g	[M1736]
Rotenone	5g / 25g	[R0090]

For Laboratory Use, Research Purposes Only.

Proteinogenic Amino Acids

H-Ala-OH	25g / 250g [A0179]	H-Leu-OH	5g / 25g [L0029]
H-Arg-OH	25g / 100g / 500g [A0526]	H-Lys-OH	25g / 100g [L0129]
H-Asn-OH Monohydrate	25g / 250g [A0542]	H-Met-OH	25g / 100g / 500g [M0099]
H-Asp-OH	25g / 500g [A0546]	H-Phe-OH	25g / 250g [P0134]
H-Cys-OH	25g / 100g / 500g [C0515]	H-Pro-OH	25g / 250g [P0481]
H-Glu-OH	25g / 500g [G0059]	H-Ser-OH	5g / 25g / 250g [S0035]
H-Gln-OH	25g / 100g / 500g [G0063]	H-Thr-OH	25g / 100g / 500g [T0230]
H-Gly-OH	25g / 500g [G0099]	H-Trp-OH	25g / 100g [T0541]
H-His-OH	25g / 250g [H0149]	H-Tyr-OH	25g / 100g / 500g [T0550]
H-Ile-OH	25g / 250g [I0181]	H-Val-OH	25g / 100g / 500g [V0014]

Biologically-modified Amino Acids

H-Lys(Ac)-OH	1g [A2652]	<i>N,N</i>-Dimethylglycine Hydrochloride	25g [D0728]
Creatine	25g / 100g [C3610]	L-Selenocystine	250mg [E1368]
DL-DOPA	1g [D0599]	H-DL-Pyr-OH	25g / 100g / 500g [G0061]
L-DOPA	5g / 25g / 100g [D0600]	H-Pyr-OH	25g / 100g / 500g [P0573]
3,5-Diiodo-L-tyrosine Dihydrate	5g / 25g [D0612]	H-D-Pyr-OH	5g / 25g [P1354]

Non-Proteinogenic Amino Acids

H-β-Ala-OH	25g / 500g [A0180]	2-Methylalanine	25g / 100g / 500g [A0323]
L-Alloisoleucine	200mg [A2214]	DL-2-Amino-<i>n</i>-octanoic Acid	5g / 25g [A0382]
D-Alloisoleucine	1g / 5g / 25g [A0212]	DL-2-Aminopimelic Acid	1g [A0404]
DL-2-Aminobutyric Acid	25g [A0280]	Anthranilic Acid	25g / 100g / 500g [A0497]
GABA	25g / 100g / 500g [A0282]	(<i>R</i>)-(-)-2-Aminobutyric Acid	1g / 5g [A1377]

N-Protected Amino Acids

Ac-Amino Acids

α-Acetamidocinnamic Acid	25g [A0014]	Ac-Gly-OEt	1g / 25g [A0094]
Ac-DL-Ala-OH	10g [A0072]	Ac-DL-Leu-OH	5g / 25g [A0097]
<i>N</i>-Acetylanthranilic Acid	25g [A0078]	Ac-Leu-OH	5g / 25g [A0098]
<i>N</i>-Acetyl-3,5-diiodo-L-tyrosine	100mg [A0087]	Ac-DL-Met-OH	25g / 500g [A0100]
Ac-Gly-OH	25g / 100g / 500g [A0093]	Ac-D-Phe-OH	1g / 5g [A0105]

C-Protected Amino Acids

Amino Acid Methyl Esters

H-Gly-OMe-HCl	25g / 500g [G0246]	H-Arg-OMe-2HCl	5g / 25g [A2017]
H-Phe-OMe-HCl	25g [P1278]	H-His-OMe-2HCl	5g / 25g [H0977]
H-Ala-OMe-HCl	5g / 25g [A1466]	H-Met-OMe-HCl	5g [M0853]
H-Cys-OMe-HCl	5g / 25g / 500g [C0577]	H-Tyr-OMe-HCl	5g / 25g [T1108]
H-Pro-OMe-HCl	5g / 25g [P0342]	H-Ser-OMe-HCl	5g / 25g [B0267]
H-Val-OMe-HCl	5g / 25g [V0056]	H-Trp-OMe-HCl	5g / 25g [T1657]

Side Chain Protected Amino Acids (N,C-termini Free)

H-Ser(Ac)-OH-HCl	100mg / 1g [A0834]	H-Cys(Bzl)-OH	1g / 5g / 25g [B0865]
H-Glu(OBzl)-OH	5g [B3316]	H-Lys(Boc)-OH	1g / 5g [B1670]
H-Lys(Ac)-OH	1g [A2652]	H-Asp(OBzl)-OH	5g / 25g [B3209]
H-DL-Ser(Bzl)-OH	1g / 10g [B0860]	H-Tyr(Bn)-OH	5g [B3210]
H-Ser(Bzl)-OH	1g / 5g [B0861]	H-Tyr(tBu)-OH	1g / 5g [B3212]

Oligopeptides

H-DL-Ala-Gly-OH	1g [A0183]	H-Gly-Ala-OH	1g / 5g [G0113]
H-DL-Ala-Gly-Gly-OH Dihydrate	100mg [A0184]	H-DL-Ala-DL-Phe-OH	1g [A0223]
H-DL-Ala-DL-Leu-OH	100mg [A0185]	H-Gly-Leu-OH	1g / 5g [G0181]
H-DL-Ala-DL-Met-OH	100mg [A0187]	H-Ala-Gln-OH	1g [A1261]
H-DL-Ala-DL-Val-OH	100mg [A0192]	H-Ala-Tyr-OH	1g [A1263]

Solid Phase Peptide Synthesis Reagents

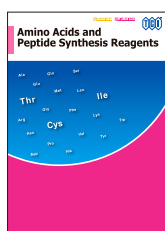
Fmoc-Amino Acids (Side Chain Protected Type)

Fmoc-D-Lys(Boc)-OH	1g / 5g [B3071]	Fmoc-Glu(OtBu)-Opfp	1g / 5g [B3318]
Fmoc-Lys(Boc)-OH	5g / 25g [B3072]	Fmoc-D-Glu(OtBu)-OH	1g / 5g [B3669]
Fmoc-Asp(OtBu)-OH	5g / 25g [B3150]	Fmoc-Asp(OBzl)-OH	5g / 25g [B3887]
Fmoc-Glu(OtBu)-OH	5g / 25g [B3167]	Fmoc-Orn(Boc)-OH	5g [B4184]
Fmoc-Ser(tBu)-OH	5g / 25g [B3168]	Fmoc-D-Asp(OtBu)-OH	1g / 5g [B4619]

Liquid Phase Peptide Synthesis Reagents

Condensing Agents

HATU	5g / 25g [A1797]	HBTU	5g / 25g / 100g [B1657]
TATU	1g / 5g [A1861]	TBTU	5g / 25g [B1658]
AOP	1g / 5g [A2782]	Bromotripyrrolidinophosphonium	
NHS	25g / 100g / 500g [H0623]	Hexafluorophosphate	5g / 25g [B2680]
BOP-Cl	5g / 25g [B1213]	1H-Benzotriazol-1-yloxytripyrrolidinophosphonium	
BOP	5g / 25g / 100g [B1651]	Hexafluorophosphate	5g / 25g [B1774]



We also offer proteinogenic amino acids, biologically-modified amino acids, non-proteinogenic amino acids, *N*-protected amino acids, *C*-protected amino acids, side chain protected amino acids (*N*,*C*-termini free), oligopeptides, solid phase peptide synthesis reagents and liquid phase peptide synthesis reagents.

For more information, please refer to the product category page on our website or the product brochure "Amino Acids and Peptide Synthesis Reagents".



Polyamines

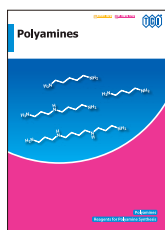
Linear Polyamines

Cadaverine	5mL / 25mL [D0108]	Spermidine Phosphate Hexahydrate	1g [S0385]
Cadaverine Hydrochloride	5g / 25g [D0099]	Spermine Phosphate Hexahydrate	1g / 5g [S0069]
Putrescine	25g / 400g [D0239]	Spermine Tetrahydrochloride	5g / 25g [B1468]
Putrescine Dihydrochloride	25g / 500g [D0081]	Xylemin Dihydrochloride	250mg / 1g [X0080]
Spermidine Phosphate	1g / 5g [S0068]	Diethylenetriamine	25mL / 500mL [D0493]

Reagents for Polyamine Synthesis

N-Boc-diaminoalkanes

<i>N</i>-Boc-1,2-diaminoethane	1g / 5g / 25g [A1371]	<i>N</i>-Boc-1,6-diaminohexane	1g / 5g / 25g [A1375]
<i>N</i>-Boc-1,3-diaminopropane	1g / 5g [A1372]	<i>N</i>-Boc-2-methyl-1,3-diaminopropane	1g / 5g [B2810]
<i>N</i>-Boc-1,4-diaminobutane	1g / 5g / 25g [A1373]	<i>N</i>-Boc-2,2-dimethyl-1,3-diaminopropane	
<i>N</i>-Boc-1,5-diaminopentane	1g / 5g [A1374]		1g / 5g [B3052]



Other polyamines and polyamine synthesis reagents are also available.

For more information, please see the product category page on our website or the product brochure "Polyamines".



Nucleosides and Their Analogs

Thymidine	1g / 5g / 25g [T0233]	Pseudouridine	50mg [P2396]
2'-Deoxycytidine	1g / 5g [D3583]	6-Azauridine	10mg [A0559]
2'-Deoxycytidine Hydrochloride	5g / 25g [D0048]	2'-O-Methyluridine	1g / 5g [M2290]
2'-Deoxyuridine	1g / 5g / 25g [D0060]	Adenosine	5g / 25g / 100g [A0152]
Cytidine	1g / 5g / 25g [C0522]	Guanosine	5g / 25g / 100g [G0171]
Uridine	5g / 25g [U0020]	Inosine	25g / 500g [I0037]

Nucleotides and Their Analogs

Cytidine 5'-Monophosphate Disodium Salt	1g / 5g [C0524]	Thymidine 5'-Monophosphate Disodium Salt	100mg [T0845]
Cytidine 5'-Monophosphate	1g / 5g [C1675]	Uridine 5'-Monophosphate Disodium Salt Hydrate	5g / 25g [U0021]
Cytidine 5'-Diphosphate Trisodium Salt	10mg / 100mg / 1g [C0523]	Adenosine 5'-Monophosphate	1g / 5g / 25g [A0158]
2'-Deoxycytidine 5'-Monophosphate Hydrate	100mg / 1g [D3673]	Adenosine 5'-Triphosphate Disodium Salt Hydrate	1g / 5g / 25g [A0157]

Nucleic Acids

Deoxyribonucleic Acid Sodium Salt from Salmon Milt	5g / 25g [D3545]	Ribonucleic Acid from Yeast	25g [R0022]
		Ribonucleic Acid Sodium Salt from Yeast	25g [R0024]

Enzymes and Coenzymes related to Nucleic Acids

β-NADH Disodium Salt, reduced form	100mg / 1g / 5g [D0920]	β-NADPH Tetrasodium Salt reduced form	100mg [T0521]
β-NADP	100mg [N0943]	Thionicotinamide Adenine Dinucleotide	
β-NADP Sodium Salt Hydrate, oxidized form	100mg / 1g [C0379]	Disodium Salt reduced form	100mg [T2980]
Phosphatase, Acid from Wheat Germ	100mg [P0251]	Thionicotinamide Adenine Dinucleotide	
β-NAD oxidized form	1g / 5g [D0919]	oxidized form	100mg [T2979]

Nucleobases and Their Analogs

Thymine	5g / 25g / 100g [T0234]	Adenine	25g / 250g [A0149]
Cytosine	5g / 25g / 100g [C0528]	Guanine	1g / 25g / 250g [G0169]
Isocytosine	5g [I0814]	Isoguanine	100mg [I0370]
4-Thiouracil	1g [T2757]	6-Thioguanine	1g / 5g [T0212]
Uracil	25g / 100g / 500g [U0013]	Xanthine	25g [X0004]
2-Thiouracil	25g / 250g [T0224]	Hypoxanthine	5g / 25g [H0311]
5-Fluorouracil	5g / 25g [F0151]	2-Thioxanthine	1g / 5g [T0225]
5-Fluorocytosine	1g / 5g / 25g [F0321]	Azathioprine	5g / 25g [A2069]
6-Azauracil	1g / 5g [A0558]	2,6-Dichloropurine	1g / 5g / 25g [D2470]
5-Ethynyluracil	200mg / 1g [E1096]	2-Fluoroadenine	200mg / 1g [F0647]

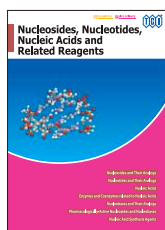
Pharmacologically-Active Nucleosides and Nucleobases for Research and Experimental Use

5-Fluorouracil	5g / 25g [F0151]	Acadesine	50mg [A2528]
5-Fluorocytosine	1g / 5g / 25g [F0321]	Lamivudine	100mg / 1mg [L0217]
Favipiravir	25mg / 100mg [F1296]	Decitabine	20mg / 100mg [A2232]
Ribavirin	100mg / 500mg [R0077]	Cytarabine	1g / 5g [C2035]
Mizoribine	50mg / 250mg [M2399]	5-Azacytidine	100mg / 1g [A2033]

Nucleic Acid Synthesis Agents

Protecting Agents for Hydroxy and Amino Groups

Acetyl Chloride	100g / 500g [A0082]	1,3-Dichloro-1,1,3,3-tetramethyldisiloxane	5g / 25g [D2334]
Isobutryl Chloride	25g / 100g / 500g [I0115]	HMDS	25mL / 100mL / 500mL [H0089]
Pivaloyl Chloride	25mL / 500mL [P0677]	Trimethylsilyl Trifluoromethanesulfonate	5g / 25g / 250g [T0871]
Chlorotrimethylsilane	25mL / 100mL / 500mL [C0306]	1,3-Dichloro-1,1,3,3-tetraisopropylidisiloxane	5g / 25g [D1608]
N,N-Dimethylformamide Dimethyl Acetal	25mL / 100mL / 500mL [D1293]		
TBDMSCI	5g / 25g / 100g [B0995]		



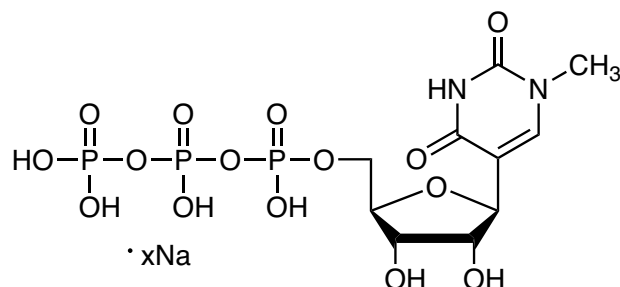
We also offer nucleosides and analogs, nucleotides and analogs, nucleobases and analogs, pharmacologically-active nucleosides and nucleobases (for research and experimental use), and nucleic acid synthesis agents.

For more information, please see the product category pages on our website or the product brochure "Nucleosides, Nucleotides, Nucleic Acids and Related Reagents".



RNA Base-modified Nucleoside Triphosphates

In recent years, numerous studies have demonstrated that mRNA has outstanding abilities to elicit potent immune responses, making it a viable new platform for the development of next-generation vaccines. This product is the 5'-triphosphate sodium salt of 1-methylpseudouridine (m1Ψ) which enables comparatively high protein yields and is read as uridine (U). Furthermore, m1Ψ enhances immune evasion and consequently improves vaccine efficacy.



N¹-Methylpseudouridine 5'-Triphosphate Sodium Salt (ca. 100mM in Water) [for transcription][for Molecular Biology]
0.01mL / 0.25mL [M3544]

Reference K. D. Nance, J. L. Meier, *ACS Cent. Sci.* **2021**, *7*, 748. <https://doi.org/10.1021/acscentsci.1c00197>

Epigenetics Research Reagents

It has been revealed that cells memorize information and regulate gene expression regardless of the gene sequences at the stages of growth and differentiation. The research about DNA methylation and Histone modification related to the epigenetic mechanism is expected to be applied to cancer treatment or regenerative treatment.

DNA Methylation Inhibitors

Zebularine	200mg / 1g [Z0022]
RG 108	50mg / 200mg [P2023]
5-Azacytidine	100mg / 1g [A2033]
5-Aza-2'-deoxycytidine	20mg / 100mg [A2232]
Genistein	100mg / 1g [G0272]
Procaine Hydrochloride	25g / 100g [A1163]
(-)-Epigallocatechin Gallate	100mg / 500mg [E0694]
Caffeic Acid	5g / 25g [C0002]
Chlorogenic Acid	1g / 5g [C0181]
Hydralazine Hydrochloride	5g / 25g [H0409]

Histone Deacetylase (HDAC) Inhibitors

T 247	5mg [A2897]
CC-149	5mg [H1340]
Vorinostat (=SAHA)	200mg [H1388]
Acetyldinaline	10mg / 50mg [A2501]
M 344	20mg / 100mg [D4188]
Splitomicin	200mg / 1g [S0892]
Trichostatin A	10mg / 50mg [T2477]
Sodium Butyrate	25g / 100g [S0519]
Valproic Acid	25mL / 100mL / 500mL [P0823]
Valproic Acid Sodium Salt	25g / 100g [S0894]
Butein	100mg / 1g [B3803]
Quercetin Hydrate	25g [P0042]
Piceatannol	100mg / 1g [P1928]
Resveratrol	1g / 5g / 25g [R0071]
Belinostat	25mg / 100mg [B5888]
Cambinol	5mg / 25mg [C3535]
EX-527	25mg [C2739]
(-)-Trichostatin A	10mg [T3633]

Histone Demethylase Inhibitors

NCDM-32b	5mg [D4078]
NCDM-64	5mg [C3134]
BIX 01294 Trihydrochloride	25mg [B4211]
Daminozide	5g / 25g [D4015]
PCA	5g / 25g [P2416]

Methylated Nucleosides

2'-Deoxy-5-(hydroxymethyl)cytidine (= 5-hmdC)	50mg / 200mg [D4220]
2'-Deoxy-5-methylcytidine (= 5-mdC)	100mg / 500mg / 5g [D3610]
5-Methylcytidine	1g [M1931]

A2897, H1340, D4078 and C3134 are commercialized under instruction by Professor Naoki Miyata and coworkers.

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Fatty Acyls

Saturated Fatty Acids

Acetic Acid	300mL [A2035]	Heptanoic Acid	25mL / 500mL [H0030]
Propionic Acid	25mL / 500mL [P0500]	<i>n</i>-Octanoic Acid	25mL / 500mL [O0027]
Butyric Acid	25mL / 500mL [B0754]	Nonanoic Acid	25mL / 100mL / 500mL [P0952]
Valeric Acid	25mL / 500mL [V0003]	Decanoic Acid	25g / 400g [D0017]
Hexanoic Acid	25mL / 500mL [H0105]	Undecanoic Acid	25g / 250g [U0004]

Glycerolipids

Monocaprylin	1g / 5g [M1071]	Monostearin	25g / 500g [G0085]
Monocaprin	1g / 5g [M1072]	Monoolein	25g / 500g [G0082]
Monomyristin	1g / 5g [M1073]	Monoelaidin	1g [M1075]
Monolaurin	5g / 25g [G0081]	α,α'-Dilaurin	10g [G0079]
Monopalmitin	25g [G0083]	Tributylin	25mL / 500mL [T0364]

Phospholipids

Lecithin from Egg	25g / 100g [L0022]	DOPC	250mg / 1g [D4250]
Lecithin from Soybean	25g / 500g [L0023]	DEPC	250mg [D5319]
DMPC	200mg / 1g [D3924]	L-DMPE	250mg [D4249]
L-DPPC	200mg / 1g [D3925]	L-DPPE	250mg [D4213]
DSPC	200mg / 1g [D3926]	DSPE	250mg [D4214]

Sphingolipids

α-Galactosylceramide	1mg [G0509]	Ganglioside GM₃	Contact us. [G0489]
Ganglioside GM₃[d18:1, (Carbon-13)C16:0]	Contact us. [G0419]	Ganglioside GM₃(Neu5Gc) (phyto-type)	Contact us. [G0510]
Ganglioside GM₁[d18:1, (Carbon-13)C16:0]	Contact us. [G0421]	Sialyl nLc₄Cer	Contact us. [S0910]
Ganglioside GM₃ (phyto-type)	Contact us. [G0422]	Globo-H Ceramide	1mg / 5mg [G0589]

Sphingoid Bases

Phytosphingosine	1g / 5g [P1765]
D-Sphingosine	25mg [S0874]

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Lipid Extracts, Oils

Croton Oil

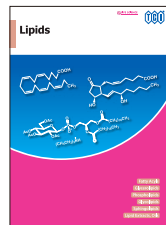
5mL / 25mL [C0421]

Cedar Oil

25mL / 100mL / 500mL [C0626]

Oil of Origanum

25g [O0051]



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Lipid Peroxide Measurement Reagents

When unsaturated fatty acids are oxidized *in vivo*, malondialdehyde (MDA) is formed. 2-Thiobarbituric Acid (TBA) reacts with malondialdehyde under high temperature and acidic conditions to form a red complex, MDA-TBA adduct, with an absorbance maximum of 532 nm.

2-Thiobarbituric Acid [for Biochemical Research]

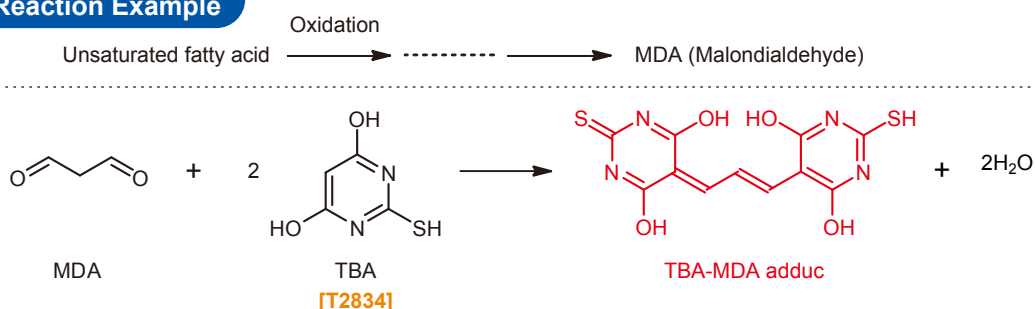
5g [T2834]

Related Product

Malonaldehyde Bis(dimethyl Acetal) [for Biochemical Research]

5g [T2833]

Reaction Example



References

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 P. Hasani, N. Yasa, S. Vosough-Ghanbari, A. Mohammadirad, G. Dehghan, M. Abdollahi, *Acta Pharm.* **2007**, 57, 123. <https://doi.org/10.2478/v10007-007-0010-z>

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