

Keratanase II

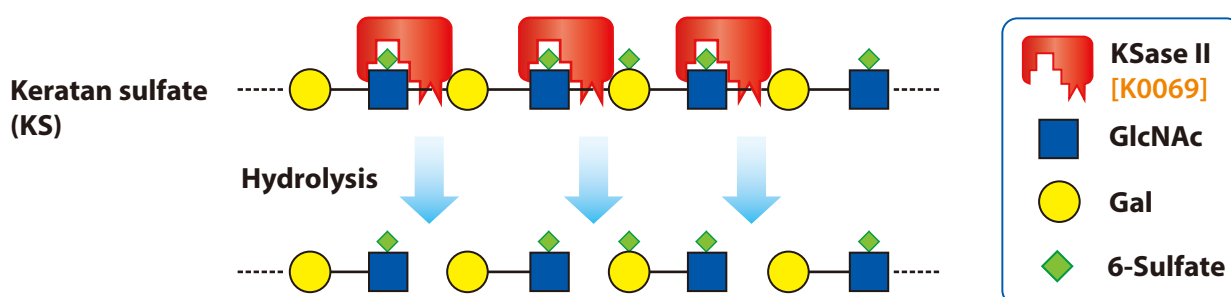
Hydrolytic Enzyme Specific to Keratan Sulfate

Keratanase II from *Bacillus circulans*, Recombinant

1.0 U/vial [K0069]

Keratanase II (KSase II) is a recombinant enzyme expressed in *Escherichia coli* using a gene derived from *Bacillus circulans*, and specifically acts on keratan sulfate (KS) by hydrolyzing the β 1-3 linkage between *N*-acetylglucosamine (GlcNAc) and galactose (Gal).

Activity of KSase II to Keratan Sulfate



Application: Analysis following enzymatic reaction using KSase II

TLC (Thin-Layer Chromatography)

Developing solvent
[BrOH:EtOH:1% AcOH=1:1:1]

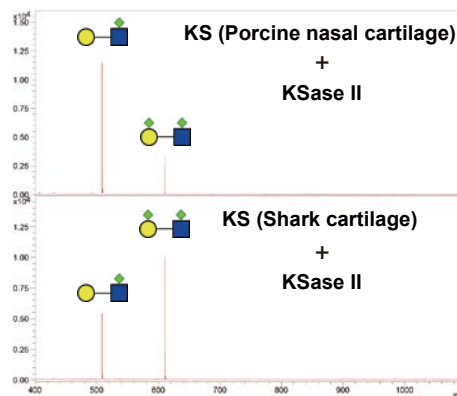
KS disaccharides

KS 50 ug (10 mg/ml)
(Porcine nasal cartilage)

KSase II [K0069]



MALDI-TOF MS



Keratan Sulfate (KS)

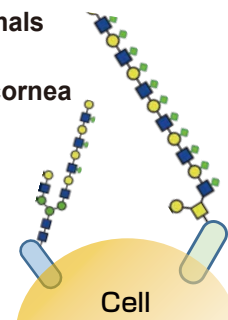
- Kind of a glycosaminoglycan found in the cornea, cartilage, and bone of animals
- Expressed as *N*-linked or *O*-linked glycans in proteoglycans
- Participates in crucial roles in tissues such as the brain, dermis, joints, and cornea
- The epitopes of stem cell marker antibodies such as R-10G and TRA-1-60/81

Related field of research

Stem cell marker

ALS (Amyotrophic lateral sclerosis)

COPD (Chronic obstructive pulmonary disease)

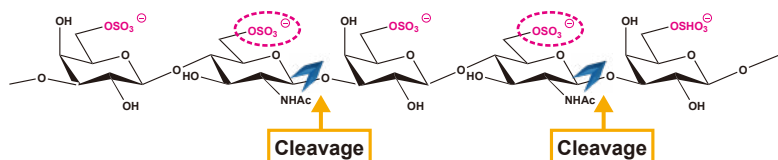


Keratanase II: Hydrolytic Enzyme Specific to Keratan Sulfate

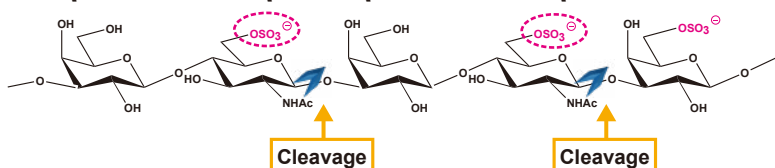
Substrate specificities of KSase II

KSase II acts on keratan sulfate similarly to hexosaminidase. GlcNAc sulfated at the 6-position is essential for enzyme recognition, and it does not have any effect on whether Gals are sulfated or not.

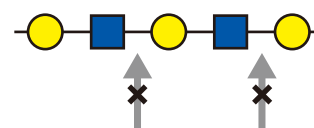
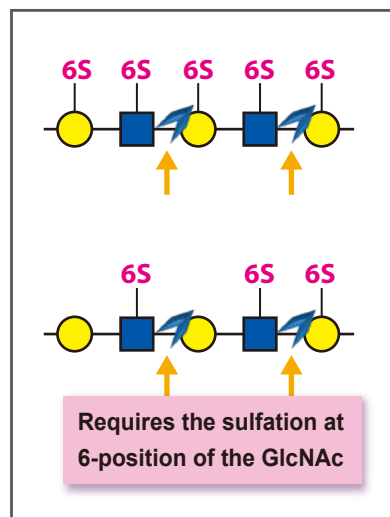
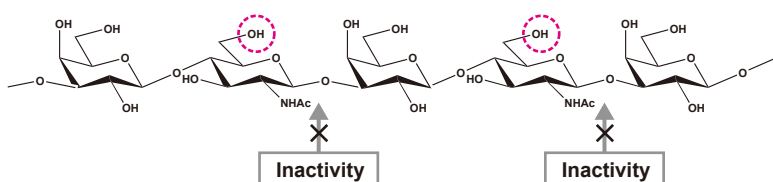
Keratan Poly-Sulfate



Keratan Low-Sulfate



Poly Lactosamine



Related Products: Other oligosaccharide-releasing enzymes

Endo-type *N*-glycanase [for hydrolysis of biantennary *N*-glycan]

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

100 mU/vial [A1651]

Glycosynthase (Endo-M-N175Q)

100 mU/vial [G0365]

Endo-M-W251N

500 mU/vial [E1339]

Endo-type *O*-glycanase [for hydrolysis of core1 *O*-glycan epitope]

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

100 mU/vial [A1844]

O-Glycosidase for core 1 (Endo- α and Sialidase mix)

100 mU/vial [G0622]

Endo-type glycosphingolipidase [for hydrolysis of Glycosphingolipid]

rEGCase I

300 mU/vial [R0240]

rEGCase II

100 mU/vial [R0242]

rEGCase I assisted by Activator II

300 mU/vial [R0241]

rEGCase II assisted by Activator II

100 mU/vial [R0243]

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