Pyrogallol Red (Ready-to-use solution) [for Protein determination]

Product Information

Product No. : P2575

Volume : 100 mL

Preservative : 0.05% Sodium azide

Description

This product is supplied as a ready-to-use solution for protein determination based on the pyrogallol red-molybdate complex. When the dye binds proteins, the absorption maximum of the dye shifts from 480 nm to 600 nm in a linear manner with an increase in the quantity of the protein. This product requires a standard protein solution (such as BSA).

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Application

Material

Standard protein solution:
Protein solution whose concentration is known

Procedure

1. Bring the pyrogallol red solution (Product No. P2575) to room temperature.
2. Gently mix the pyrogallol red solution (Product No. P2575).
3. Prepare standard protein solutions (see Table 1).
4. Mix standard protein solutions or unknown protein samples with the pyrogallol red solution (Product No. P2575) (see Table 1).
5. Incubate for 30 minutes at room temperature.
6. Measure absorbance at 600 nm. The absorbance should be measured within 60 minutes of the start of the reaction.
7. Create a standard curve by plotting the corrected blank absorbance at 600 nm for each standard solution or protein sample against its concentration in µg/mL. The corrected blank absorbance is calculated by subtracting the average absorbance of the blank solution at 600 nm from that of standard solution. Use the standard curve and determine the protein concentration of each unknown protein sample.

Table 1 : Volume for test tube or micro plate assay

Assay	test tube	micro plate
Measurement range	0.1 - 1.0 mg/mL	0.1 - 1.0 mg/mL
Protein standard or sample solution	50 µL	10 µL
Product No. P2575	1 mL	200 µL
Reaction	Incubate for 30 minutes at room temperature.	
Measurement	Within 1 hour, measure absorbance at 600 nm.	

Table 2 : Compatible substance concentrations in protein sample

Substances at the following concentrations in the sample solutions do not affect the reaction results.	
Substance	concentration
Buffers	
Glycine	100 mM
Tris	2 M
HCl	200 mM
HEPES	100 mM
MES	100 mM
MOPS	100 mM
PIPES	100 mM
Tricine	100 mM
Imidazole	200 mM
Glucose	1 M
Sucrose	25 %
Fructose	1 M
Salts	
$(NH_4)_2SO_4$	1 M
KCl	1 M
$MgCl_2$	50 mM
$CaCl_2$	10 mM
$NiCl_2$	10 mM
$ZnCl_2$	10 mM
NaCl	2 M
NaOH	100 mM
NaH_2PO_4	500 mM
NaN_3	0.50 %
Chelating Agents	
EDTA	100 mM
EGTA	10 mM
Sodium citrate	200 mM
Solvents	
Acetone	10 %
DMSO	10 %
Ethanol	10 %
Methanol	10 %
Glycerol	10 %
Detergents	
SDS	0.10 %
Triton X-100	0.10 %
Tween-20	0.10 %
Denaturants	
DTT	100 mM
Glutathione	1 mg / mL
2-Mercaptoethanol	1 M
Guanidine-HCl	1 M
Urea	3 M

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