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PRODUCT INFORMATION

Unstained Protein Molecular Weight Marker

Pub. No. MAN0011769
Rev. Date 27 September 2017 (Rev. B.00)

#26610

Assembling Lot 00000000

Filling Lot 00000000

Expiry Date MM.YYYY

Store at -20 °C

Components	#26610
Unstained Protein Molecular Weight Marker	2 x 1 mL

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For Research Use Only. Not for use in diagnostic procedures.

Introduction

The Thermo Scientific Unstained Protein Molecular Weight Markers are a mixture of seven purified proteins ranging from 14.4 kDa to 116 kDa. The marker is suitable for accurate molecular weight determination after SDS-PAGE or Western blotting and serves as a standard to calibrate the mobility of prestained markers. The unstained marker can be detected by coomassie or silver stain or with protein stains in Western blots. The marker is conveniently packaged and ready to use with no diluting or additional reducing agent necessary.

Storage Buffer: 62.5 mM Tris•HCl (pH 7.0 at 25 °C), 1 mM EDTA, 2 % (w/v) SDS, 50 mM DTT, 30 mM NaCl, 1 mM NaN_3, 0.01 % (w/v) bromophenol blue and 50 % (v/v) glycerol.

Important Product Information

- Divide the marker into aliquots to avoid contamination.
- This marker is not intended for use in native polyacrylamide gel electrophoresis.
- For silver-stain applications, dilute the marker approximately 1/50 in reducing sample buffer.
- If additional bands appear in the protein marker, add newly prepared dithiothreitol (DTT) solution to 100 mM final concentration. DTT oxidation in the storage buffer can cause the appearance of additional bands.

Procedure for Use in Polyacrylamide Gel Electrophoresis

1. Thaw the marker at room temperature to dissolve precipitated solids.
2. Mix the tube gently and thoroughly to ensure that the solution is homogeneous. Aliquot marker based upon typical use.
3. Heat an aliquot of the marker for 10 minutes at 95 °C to completely denature the proteins. Cool the marker and mix.
4. Load an appropriate volume of marker onto the gel.
   - Mini-gel: 5 µL per well (0.75-1.0 mm thick) or 10 µL per well (1.5 mm thick)
   - Large gel: 10 µL per well (0.75-1.0 mm thick) or 20 µL per well (1.5 mm thick)
5. Return the unused marker to -20 °C.

Unstained Protein Molecular Weight Marker

MW, kDa	Protein	Source
116.0	β–galactosidase	*E.coli*
66.2	Bovine serum albumin	bovine plasma
45.0	Ovalbumin	chicken egg white
35.0	Lactate dehydrogenase	porcine muscle
25.0	REase Bsp98I	*E.coli*
18.4	β–lactoglobulin	bovine milk
14.4	Lysozyme	chicken egg white

8-16% Tris-glycine SDS-PAGE

General References

Burnette, W.N. (1981). “Western blotting”: electrophoretic transfer of proteins from sodium dodecyl sulfate – polyacrylamide gels to unmodified nitrocellulose and radiographic detection with antibody and radioiodinated protein A. *Anal Biochem* 112(2):195-203.

Kurien, B.T. and Scofield, R.H. (2003). Protein blotting: a review. *J Imm Meth* 274:1-15.

Laemmli, U.K. (1970). Cleavage of structural proteins during the assembly of the head of bacteriophage T4. *Nature* 227:680-5.

Towbin, H., et al. (1979). Electrophoretic transfer of proteins from polyacrylamide gels to nitrocellulose sheets: procedure and some applications. *Proc Natl Acad Sci USA* 76:4350-4.

PRODUCT USE LIMITATION

This product is developed, designed and sold exclusively *for research purposes and in vitro use only.* The product was not tested for use in diagnostics or for drug development, nor is it suitable for administration to humans or animals.
Please refer to www.thermofisher.com for Material Safety Data Sheet of the product.