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PRODUCT INFORMATION

Thermo Scientific
Spectra Multicolor High Range Protein Ladder

#26625 2 x 250 µl

Lot: XXXXXXXX **Expiry Date: __**

WARNING! HARMFUL IF INHALED OR ABSORBED THROUGH SKIN. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION. MAY BE HARMFUL IF SWALLOWED. CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS: KIDNEYS, LUNGS, UPPER RESPIRATORY TRACT, SKIN, EYES. CONTAINS MATERIAL WHICH MAY CAUSE DAMAGE TO THE FOLLOWING ORGANS: LIVER, GASTROINTESTINAL TRACT.
Avoid exposure - obtain special instructions before use. Do not breathe vapor or mist. Do not ingest. Do not get in eyes or on skin or clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling. Refer to MSDS.

Store at -20°C

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Made in Lithuania

Introduction

The Thermo Scientific™ Spectra™ Multicolor High Range Protein Ladder is a prestained mixture of eight recombinant proteins ranging from 40 kDa to 300 kDa. Three different chromophores are bound to the proteins, producing a brightly colored ladder specifically designed for large protein analysis. The protein ladder is conveniently packaged and ready to use with no heating, diluting or additional reducing agent necessary.
Lot-to-lot variation of the apparent molecular weight of prestained proteins is ~5%.

Storage Buffer: 62.5mM Tris•H_3PO_4 (pH 7.5 at 25°C), 1mM EDTA, 2% (w/v) SDS, 10mM DTT, 1mM NaN_3, 33% (v/v) glycerol.

Important Product Information

- Do not boil the protein ladder.
- The large proteins (> 100 kDa) in the protein ladder may require longer transfer times or higher transfer voltages for Western blotting.
- The mobility of proteins in the ladder can vary in different SDS-PAGE buffer systems; however, they are suitable for approximate molecular weight determination when calibrated against unstained standards in the same system. See the table provided for migration patterns in different electrophoresis conditions.
- For precise MW determination uses the Thermo Scientific™ PageRuler™ Unstained High Range Protein Ladder (#26637).
- Each lot of the Spectra Multicolor High Range Protein Ladder is calibrated against PageRuler Unstained Protein Ladder and calculated apparent molecular weights are reported in the lot specific product information sheet provided with the product.

Rev. 5

Migration Patterns of Spectra Multicolor High Range Protein Ladder

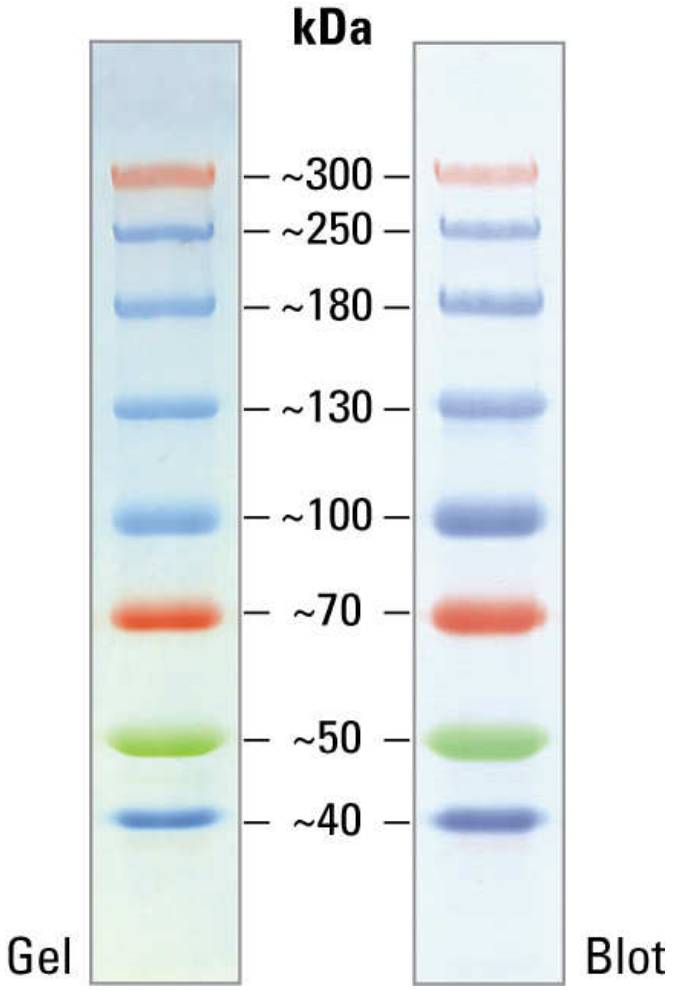
Gel type	Tris-Glycine						Tris-Acetate*		Bis-Tris*
Gel concentration	4-12%	4%	6%	8%	10%	4-20%	3-8%	7%	4-12%
Running buffer	Tris-Glycine						Tris-Acetate		MOPS
	Apparent Molecular Weights, kDa								
% lenght of gel									
10	300	300	300	300	300	300	270	270	270
20	250		250	250	250	250	205	205	185
30	180		180	180	180	180	150	150	140
40	130	300	130	130	130	130	120	120	115
50	100	250	100	100	100	100	85	85	80
60	70	180	70	70	70	70	65	65	65
70	50		50	50	50	50	50	50	50
80	40	130	40	40	40	40	40	40	40
90									
100		100							

* migration patterns were determined using NuPAGE® precast gels.

Recommendations for Loading

1. Thaw the ladder at room temperature for a few minutes to dissolve precipitated solids. **Do not boil!**
2. Mix gently, but thoroughly, to ensure that the solution is homogeneous.
3. Load the following volumes of the ladder on an SDS-polyacrylamide gel:
   – 10 µL per well for mini gel,
   – 20 µL per well for large gel.
   Use the same volumes for Western blotting.
   The loading volumes listed above are recommended for gels with a thickness of 0.75 mm-1.0 mm. The loading volume should be doubled for 1.5 mm thick gels.

Representative picture of Spectra Multicolor High Range Protein Ladder



4-12% 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.thermoscientific.com/onebio for Material Safety Data Sheet of the product.