



PRODUCT INFORMATION

Thermo Scientific Spectra Multicolor High Range Protein Ladder

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Components	#26625	#26626
Spectra Multicolor High Range Protein Ladder	2 x 250 μ L	50 μ L

Store at -20 °C

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

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: 62.5 mM Tris•H₃PO₄ (pH 7.5 at 25 °C), 1 mM EDTA, 2 % (w/v) SDS, 10 mM DTT, 1 mM NaN₃, 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 use the Thermo Scientific™ PageRuler™ Unstained High Range Protein Ladder (#26637).

Migration Patterns of Spectra Multicolor High Range Protein Ladder

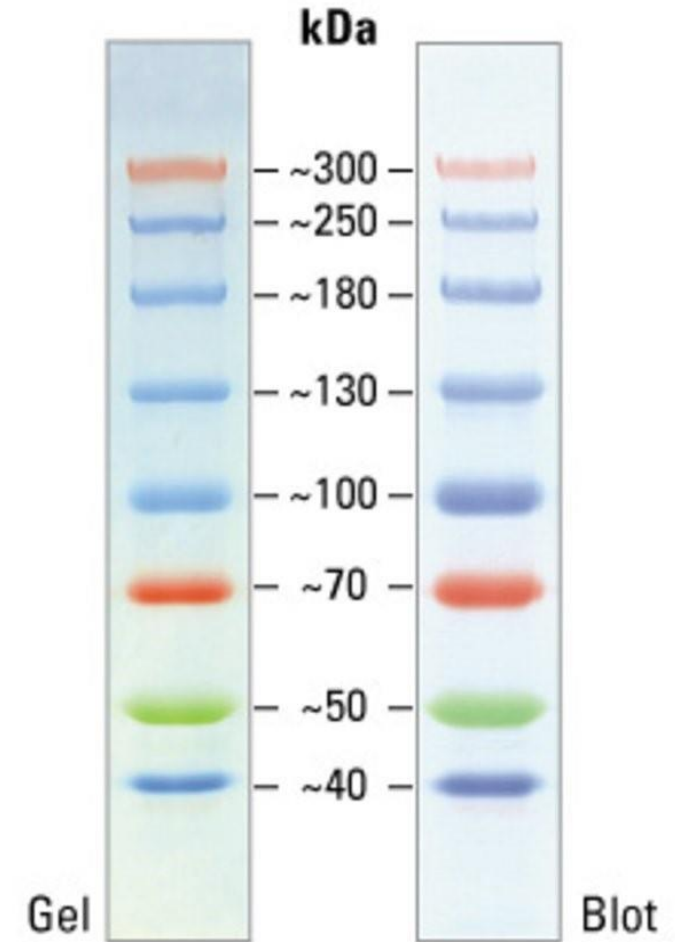
Gel type		Tris-Glycine					Tris-Acetate*		Bis-Tris*	
Gel concentration		4-12%	4%	6%	8%	10%	4-20%	3-8%	7%	4-12%
Running buffer		Tris-Glycine					Tris-Acetate		MOPS	
		Apparent Molecular Weights, kDa								
% length of gel ↓	10			300	300	300				
	20	300		250	250	250	300	270	270	270
	30	250		180	180	180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

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.thermofisher.com for Material Safety Data Sheet of the product.

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