



PRODUCT INFORMATION

Thermo Scientific PageRuler Prestained Protein Ladder

Pub. No. MAN0011772

Rev. Date 19 June 2019 (Rev. C.00)

Components	#26616	#26617	#26618
PageRuler Prestained Protein Ladder	2 x 250 µL	10 x 250 µL	25 µL

Store at -20°C

www.thermofisher.com

www.thermoscientific.com/pierce

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

Introduction

The Thermo Scientific™ PageRuler™ Prestained Protein Ladder is a prestained mixture of ten recombinant proteins ranging from 10 kDa to 180 kDa. Three different chromophores are bound to the proteins, producing a brightly colored ladder. 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 protein ladder can be stored at 4 °C for up to 3 months.
- For precise protein MW determination use the PageRuler Broad Range Unstained Protein Ladder (#26630).

Migration Patterns of PageRuler Prestained Protein Ladder

Gel type		Tris-Glycine						Tris-Acetate*		Bis-Tris*						
Gel concentration		4-20%	8-16%	10-20%	8%	10%	12%	15%	3-8%	7%	4-12%		10%		12%	
Running buffer		Tris-Glycine						Tris-Acetate		MOPS	MES	MOPS	MES	MOPS	MES	
		Apparent Molecular Weights, kDa														
% lenght of gel ↓	10							180								
	20							180 130 100								
	30	180	180	180	180	180	180	130 100	150		140	140	140	140	140	140
	40	130	130	100	130	130	100	70		120	115	115	115	115	115	115
	50	100	100	70	100	100	70	55		85	80	80	80	80	80	80
	60	70	70	55	70	55	40	40	150	65	70	65	70	70	65	70
	70	55	55	40	55	40	35	35	120	50	50	50	50	50	50	50
	80	40	40	35	40	35	25	25	85	40	40	40	40	40	40	40
	90	35	35	25	35	25	15	15	65	30	30	30	30	30	30	30
	100	25	25	15	25	15	10	10	50	25	25	25	25	25	25	25
	100	15	15	10	15	10	10	10	40	15	15	15	15	15	15	15
	100	10	10	10	10	10	10	10	30	10	10	10	10	10	10	10
100	10	10	10	10	10	10	10	25	10	10	10	10	10	10	10	

* migration patterns were determined using respective NuPAGE® precast gels.

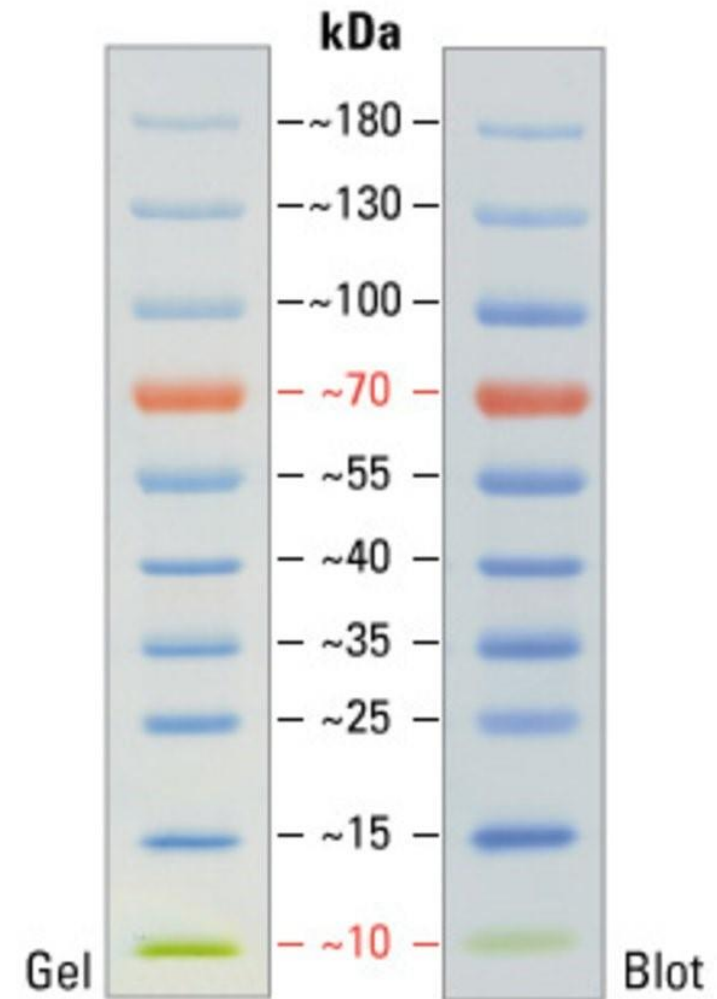
Recommendations for Loading

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 the solution is homogeneous.
3. Load the following volumes of the ladder on an SDS-polyacrylamide gel:
 - 5 μ L per well for mini gel,
 - 10 μ L 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 0.75-1.0 mm. The loading volume should be doubled for 1.5 mm thick gels.

Important Notes

- Prestained proteins can have different mobilities in various 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.
- In low-percentage gels (< 10 %), the low-molecular weight proteins in the ladder may migrate with the dye front.
- PageRuler Prestained Protein Ladder can be used in Western blotting with all common membranes: PVDF, nylon and nitrocellulose.
- Longer transfer times or higher transfer voltages may be required for Western blotting of large (>100 kDa) proteins.

PageRuler Prestained Protein Ladder



4-20% 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.

© 2019 Thermo Fisher Scientific Inc. All rights reserved. All trademarks are the property of Thermo Fisher Scientific Inc. and its subsidiaries.