EUROMEDEX

CERTIFICATE OF ANALYSIS

Prestained Protein Ladder
(Improved green 10kDa Band)

#06P-0111   2x 250 µl

Lot   Exp. date:

Store at -20°C

In total 2 vials

Description
The 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•H_3PO_4 (pH 7.5 at 25 °C), 1 mM EDTA, 2 % (w/v) SDS, 10 mM DTT, 1 mM NaN_3, 33 % (v/v) glycerol.

Important Product Information
- Do not boil the protein ladder.
- The protein ladder can be stored at +4 ºC for up to 3 months.
- For precise protein MW determination use the Broad Range Unstained Protein Ladder.

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 µl per well for mini gel,
– 10 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 0.75-1.0 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.
- 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.

**Prestained Protein Ladder
4-20% Tris-glycine SDS-PAGE**
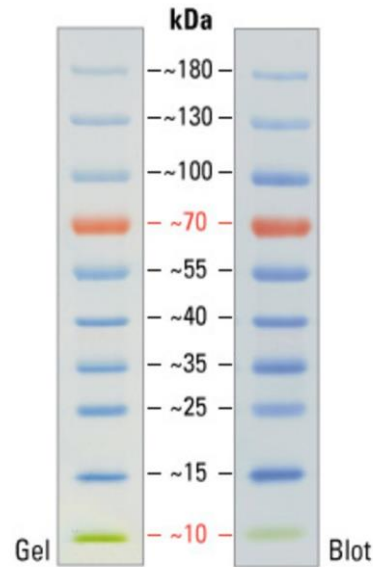
References

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 radio iodinated 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.

Migration Patterns of 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 (% length of gel shown 10–100)

% length	4-20%	8-16%	10-20%	8%	10%	12%	15%	3-8%	7%	4-12% MOPS	4-12% MES	10% MOPS	10% MES	12% MOPS	12% MES
			180		180	180/130/100	180/130/100/70		150			140/115	140/115	140/115	140/115/80/70
	180	180	130/100	180	130/100	70	55			140/115	140/115	80	80	80	
	130/100	130	70	130	70	55	40		120	80	80/70	65	70	65	50
	70	100	55	100	55	40	35	150	85	65	65	50	50	50	40
	55	70	40/35	70	40	35	25	120	65	50	50	40	40	40	30
	40/35	55	25	55	35	25		85	50	40	40	30	30	30	25
	25	40/35		40	25	15	15	65	50	30	30			25	15
	15	25	15	35	15			50	40	25	25/15	25	15		
		15	25	25	15	10	10	40	30	15				15	10
		10	10	15	10			30/25	25	10	10	15	10		