

CERTIFICATE OF ANALYSIS

PageRuler™ Plus Prestained Protein Ladder

#SM1811 2 x 250 µl

(for 100 mini-gel applications 5 µl per well or 50 large gel applications 10 µl per well)

Lot

Expiry Date:

Store at -20°C

In total 2 vials.

Description

The PageRuler™ Plus Prestained Protein Ladder is a mixture of 9 recombinant, highly purified colored proteins with apparent molecular weights of 10 to 250 kDa. It contains two orange proteins as reference bands. Other proteins are coupled with a blue chromophore.

The PageRuler™ Plus Prestained Protein Ladder is ready-to-use; supplied in a loading buffer for a direct loading on SDS-polyacrylamide gels.

Composition

0.1-0.2 mg/ml of each protein in 62.5 mM Tris-H₃PO₄ (pH 7.5 at 25°), 1 mM EDTA, 2% SDS, 10 mM DTT, 1 mM NaN₃ and 33% glycerol.

Applications (1-3)

- Monitoring of protein migration during SDS-polyacrylamide gel electrophoresis
- Monitoring of protein transfer onto PVDF, nylon and nitrocellulose membranes during Western blotting (see the Western Blotting Protocol at www.fermentas.com)
- Sizing of proteins on SDS-polyacrylamide gels and Western blots.

Recommendations for Loading

- 1 Thaw the ladder either at room temperature or at 37-40°C 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:
 - 5 µl per well for mini gel,
 - 10 µl per well for large gel.Use the same volumes for Western blotting.

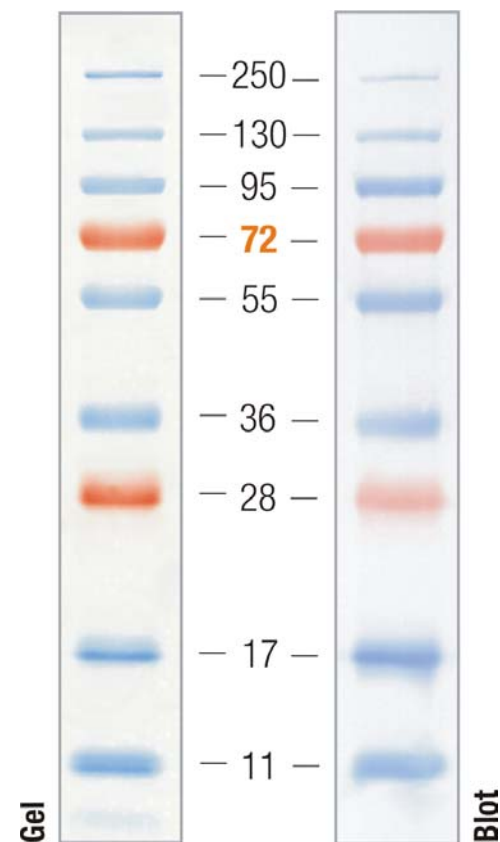
Note

- The indicated loading volume is recommended for gels with a thickness of 0.75mm. For thicker gels, the loading volume should be increased.
- 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.
- A separation gel resolves proteins effectively according to their molecular weight. Linear gradient gels are used for resolution of both small and large proteins, while low percentage gels are recommended for analysis of large proteins. In these gels, small proteins migrate with the tracking dyes during electrophoresis.

Ladder Calibration

The PageRuler™ Plus Prestained Protein Ladder is calibrated against a precise PageRuler™ Unstained Protein Ladder (#SM0661) in Tris-glycine gel.

Lot specific calculated apparent MW, kDa



8-16% Tris-glycine SDS-PAGE

QUALITY CONTROL

5 µl of PageRuler™ Plus Prestained Protein Ladder provide 9 bands of equal intensities in SDS-PAGE (Tris-glycine buffer) and after Western blotting onto a PVDF membrane.

Quality authorized by:

 Jurgita Zilinskiene

(continued on back page)

References

1. Laemmli, U.K., Cleavage of structural proteins during the assembly of the head of bacteriophage T4, *Nature*, 227, 680-685, 1970.
2. Burnette, W.N., "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, 1981.
3. Towbin, H., et al., Electrophoretic transfer of proteins from polyacrylamide gels to nitrocellulose sheets: procedure and some applications, *Proc. Natl. Acad. Sci. USA*, 76, 4350-4354, 1979.
4. Kurien, B.T. and Scofield, R.H., Protein blotting: a review, *J. Imm. Meth.*, 274, 1-15, 2003.

This product is manufactured under the license for **Strep-tag**[®] technology covered by US patents Nos. 5,506,121, 6,103,493 and foreign counterparts.

Related Products

- Loading Buffer Pack #R0891
- PageBlue[™] Protein Staining Solution #R0571
- PageRuler[™] Unstained Protein Ladder #SM0661
- PageRuler[™] Prestained Protein Ladder #SM0671
- 10X Tris-glycine-SDS Buffer #B46
- 10X Tris-tricine-SDS Buffer #B48
- Protein Standard Solution #R0882
- DTT #R0861
#R0862

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