

CERTIFICATE OF ANALYSIS

PageRuler™
Unstained Protein Ladder

#SM0661 2x250µl

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

Lot: **Expiry Date:**

Store at -20°C

In total 2 vials.

Description

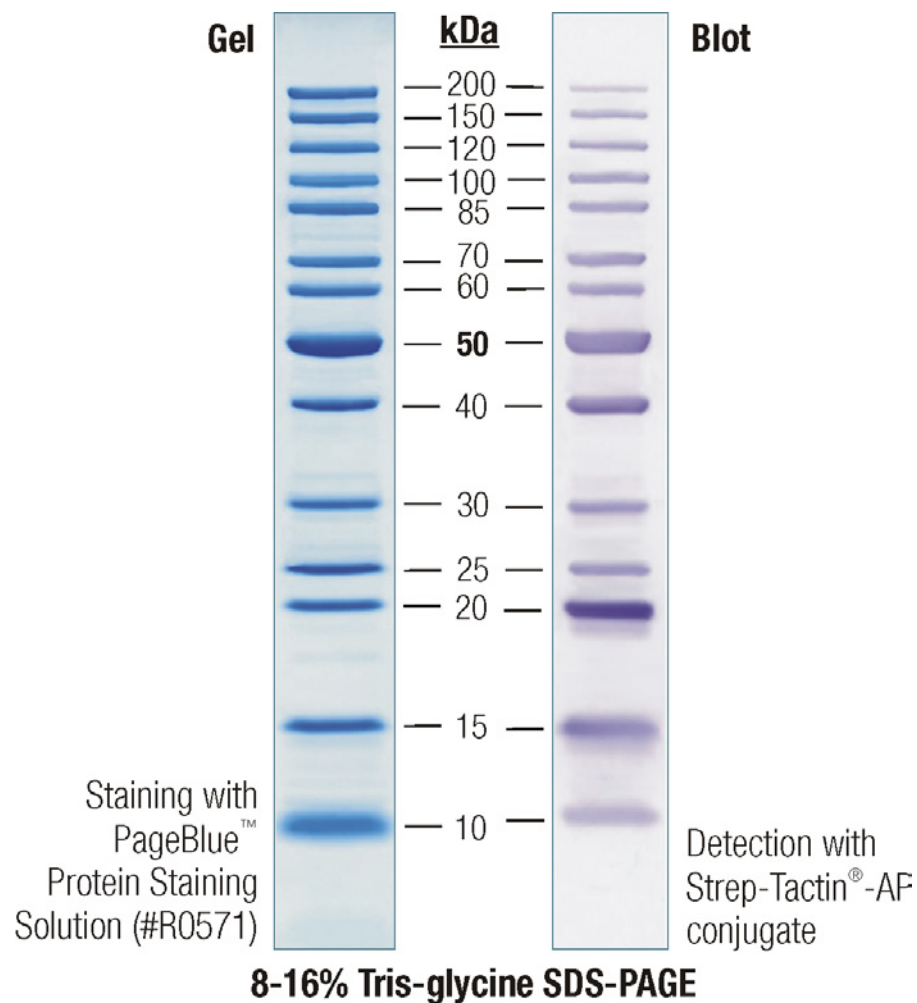
PageRuler™ Unstained Protein Ladder is a mixture of 14 recombinant, highly purified proteins designed for precise sizing of proteins by SDS-PAGE. The proteins resolve into clearly identifiable sharp bands from 10kDa to 200kDa when analyzed by SDS-PAGE and stained with Coomassie Blue (1). The PageRuler™ Unstained Protein Ladder is supplied in gel loading buffer and is ready-to-use. Each protein contains an integral *Strep*-tag® II sequence and may be detected on Western blots using *Strep*-Tactin®-AP conjugate or antibody against *Strep*-tag® II (2,3).

Contents

Approximately 0.02-0.05mg/ml of each protein in the following storage buffer:
62.5mM Tris-H₃PO₄ (pH 7.5 at 25°C),
1mM EDTA, 2% SDS, 0.1M DTT, 1mM NaN₃,
0.01% bromophenol blue and 33% glycerol.

Application

Precise molecular weight determination of polypeptides in denaturing PAA gels and Western blots (1,4).



8-16% Tris-glycine SDS-PAGE

INSTRUCTION FOR USE

- ❶ Thaw the Ladder at room temperature or heat at 37-40°C for a few minutes to dissolve precipitated solids.
DO NOT BOIL!
- ❷ Mix gently, but thoroughly to ensure the solution is homogeneous.

- ❸ Load the Ladder on an SDS-PAA gel and run.

Load volume:

5µl per well for mini gels, 3µl per well for blots,
10µl per well for large gels, 6µl per well for blots.

- ❹ After the run is complete, stain the gel or perform Western transfer procedure as desired.

Note

- The **50kDa** protein band is of greater intensity and serves as a reference.
- 8-10% gels may cause proteins with low molecular weights to migrate with the dye front.
- Loading volumes are indicated for in gels with a thickness of 0.75mm. If thicker gels are used, the loading volume should be increased.
- When Western blots are performed, PageRuler™ Prestained Protein Ladder, #SM0671, (see www.fermentas.com) might be used for monitoring of transfer efficiency.
- *Strep-tag*® II sequence detection systems are not supplied by Fermentas. Detection systems are available from IBA (see www.iba-go.de).
- The 200kDa band has lower intensity than the other bands when detected on Western blots using *Strep-Tactin*®-AP conjugate.
- The PageRuler™ Unstained Protein Ladder is optimized for use with PageBlue™ Protein Staining Solution or Coomassie Brilliant Blue R-250 staining.
For silver staining the amount of PageRuler™ Unstained Protein Ladder applied might be decreased up to 10 times.

(continued on back page)

QUALITY CONTROL

5µl of PageRuler™ Unstained Protein Ladder run on a 8-16% SDS-PAAG (mini-gel) and stained with Coomassie Brilliant Blue R-250 or detected using *Strep-Tactin*®-AP conjugate after Western transfer provide 14 easy identifiable bright bands.

Quality authorized by:



Jurgita Zilinskiene

References

1. Laemmli, U.K., Cleavage of structural proteins during the assembly of the head of bacteriophage T4, *Nature*, 227, 680-685, 1970.
2. Schmidt, T. G. M. & Skerra, A. The random peptide library-assisted engineering of a C-terminal affinity peptide, useful for the detection and purification of a functional Ig F_v fragment, *Prot. Engineering* 6, 109-122, 1993.
3. Tsiotis, G., Haase, W., Engel, A. & Michel, H. Isolation and structural characterization of trimeric cyanobacterial photosystem I complex with the help of recombinant antibody fragments, *Eur. J. Biochem.* 231, 823-830, 1995.
4. *Current Protocols in Molecular Biology*, vol. 1 (Ausubel, FM., et al., ed), John Wiley & Sons, Inc., Brooklyn, New York 10.2A, 10.6.-10.8, 1994-2002.

Related Products

- Loading Buffer Pack #R0891
- PageBlue™ Protein Staining Solution #R0571
- PageRuler™ Prestained Protein Ladder #R0671
- PageRuler™ Prestained Protein Ladder Plus #R1811
- 10X Tris-glycine-SDS Buffer #B46
- 10X Tris-tricine-SDS Buffer #B48
- Protein Standard Solution #R0882
- DTT #R0861
- DTT #R0862
- NBT #R0841, #R0842
- BCIP-T #R0821, #R0822

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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.

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.