INSTRUCTIONS

PageRuler™ Prestained NIR Protein Ladder

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26635

Number	Description
26635	**PageRuler Prestained NIR Protein Ladder,** 2 × 250µL

Storage Buffer: 62.5mM Tris•H_3PO_4 (pH 7.5 at 25°C), 1mM EDTA, 2% (w/v) SDS, 10mM DTT, 1mM NaN_3 and 33% (v/v) glycerol.

Storage: Upon receipt store at -20°C. Product is shipped with an ice pack.

Introduction

The Thermo Scientific PageRuler Prestained NIR Protein Ladder is a mixture of 10 proteins ranging from 11kDa to 250kDa, which produces 10 well-defined blue bands by SDS-PAGE (see website for product images). The near-infrared (NIR) ladder can also be visualized by SDS-PAGE or Western blotting using a fluorescent detection instrument (e.g., Typhoon™ or LI-COR Odyssey™). For easy reference, the 55kDa protein band has a greater intensity than the other proteins in the ladder. The protein ladder is conveniently packaged and ready to use with no heating, diluting, or additional reducing agent necessary.

Important Product Information

- Do not boil the protein ladder.
- Store the protein ladder for up to one year at -20°C.
- In low-percentage gels (< 10%), the low-molecular weight proteins in the ladder may migrate with the dye front.
- The large proteins (> 100kDa) in the ladder may require longer transfer times or higher transfer voltages for Western blotting.
- The mobility of prestained proteins 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 our website for migration patterns in different electrophoresis conditions.

Procedure for Using the Protein Ladder in Polyacrylamide Gel Electrophoresis

1. Thaw the ladder at room temperature. Do not boil the protein ladder solution.
2. Mix the solution gently and thoroughly to ensure it is homogeneous.
3. Load an appropriate volume of the ladder onto the gel (see Table 1).
4. Return the unused protein ladder to -20°C and store up to one year.
5. Fluorescently visualize the ladder using the 670nm red laser on a Typhoon Instrument or the 700nm channel on an Odyssey Instrument. (Optional)

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Table 1. Volumes of Thermo Scientific PageRuler Prestained NIR Protein Ladder to load for different applications.

	Visual detection (0.75-1.0mm gel thickness)	Visual detection (1.5mm gel thickness)	Infrared* imaging detection	Western blotting detection
Mini-gel	5µL	10µL	1-5µL	1-3µL
Midi gel	10µL	20µL	2-10µL	2-6µL

*For near-IR detection, optimize the ladder volume used.

Related Products

Please see the website for a complete listing of protein gels and Western blotting products.

26614	**PageRuler Unstained Protein Ladder,** 2 × 250µL
26616	**PageRuler Prestained Protein Ladder,** 2 × 250µL
26619	**PageRuler Plus Prestained Protein Ladder,** 2 × 250µL
26630	**PageRuler Broad Range Unstained Protein Ladder,** 2 × 250µL
26632	**PageRuler Low Range Unstained Protein Ladder,** 2 × 250µL
26634	**Spectra™ Multicolor Broad Range Protein Ladder,** 2 × 250µL
26625	**Spectra Multicolor High Range Protein Ladder,** 2 × 250µL
26628	**Spectra Multicolor Low Range Protein Ladder,** 250µL
LC5615	**iBright™ Prestained Protein Ladder**
XP04200BOX	**Novex™ Tris-Glycine protein gels** (see thermofisher.com/proteingels for a complete listing)
NW04120BOX	**Bolt™ Bis-Tris Plus protein gels** (see thermofisher.com/proteingels for a complete listing)

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.

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.

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