**Introduction**

The Thermo Scientific PageRuler Low Range Unstained Protein Ladders are a mixture of seven recombinant proteins ranging from 5K to 100K and a synthetic peptide at 3.4K. This unstained ladder can be detected by coomassie or silver stains or in Western blots with protein stains. For easy reference, the 25K protein band is of greater intensity (see website for product images). The 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.
- In low-percentage gels (< 8%), low-molecular weight proteins (1-20K) may migrate with the dye front. Use high-percentage gels (>14%) to obtain well-resolved bands on low-molecular weight proteins.
- Before coomassie or silver staining, fix proteins with 5% glutaraldehyde to preserve the low-molecular weight proteins in the ladder.
- For silver stain applications, dilute the protein ladder approximately 1/50 in reducing sample buffer.
- If additional bands appear in the protein ladder, add newly prepared dithiothreitol (DTT) solution to 100mM final concentration. DTT oxidation in the storage buffer can cause the appearance of additional bands.

**Procedure for Use in Polyacrylamide Gel Electrophoresis**

1. Thaw the protein ladder at room temperature. Do not boil ladder.
2. Mix the tube gently and thoroughly to ensure that the solution is homogeneous.
3. Load an appropriate volume of the protein ladder onto the gel.
   - Mini-gel: 5µL per well (0.75-1.0mm thick) or 10µL per well (1.5mm thick)
   - Large gel: 10µL per well (0.75-1.0mm thick) or 20µL per well (1.5mm thick)
4. Return the unused protein ladder to -20°C.
Related Thermo Scientific Products

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

- 26610    Unstained Protein Molecular Weight Marker, 2 × 1mL
- 26612    Prestained Protein Molecular Weight Marker, 2 × 250µL
- 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
- 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
- 84785    SuperSignal® Enhanced Molecular Weight Protein Standards, 250µL
- 84786    SuperSignal Enhanced Molecular Weight Protein Standards, 250µL
- 25244    Precise™ Protein Gels, 4-20%, 15 well
- 84713    Pierce® Protein Gels, 4-20%, 12 well
- 24615    Imperial™ Protein Stain, 1L
- 24594    GelCode™ Blue Safe Protein Stain, 1L

General References


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No other warranties, express or implied, are granted, including without limitation, implied warranties of merchantability, fitness for any particular purpose, or non infringement. Buyer’s exclusive remedy for non-conforming Products during the warranty period is limited to replacement of or refund for the non-conforming Product(s).

There is no obligation to replace Products as the result of (i) accident, disaster or event of force majeure, (ii) misuse, fault or negligence of or by Buyer, (iii) use of the Products in a manner for which they were not designed, or (iv) improper storage and handling of the Products.

Current product instructions are available at www.thermoscientific.com/pierce. For a faxed copy, call 800-874-3723 or contact your local distributor.

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