

Related Products for Electrophoresis

Catalog #	Description
161-0363	Precision Plus Protein Unstained Standards , 1,000 μ l
161-0396	Precision Plus Protein Unstained Standards Value Pack , 5 x 1000 μ l
161-0373	Precision Plus Protein All Blue Standards , 500 μ l
161-0393	Precision Plus Protein All Blue Standards Value Pack , 5 x 500 μ l
161-0374	Precision Plus Protein Dual Color Standards , 500 μ l
161-0394	Precision Plus Protein Dual Color Standards Value Pack , 5 x 500 μ l
161-0375	Precision Plus Protein™ Kaleidoscope™ Standards , 500 μ l
161-0395	Precision Plus Protein Kaleidoscope Standards Value Pack , 5 x 500 μ l
161-0385	Precision Plus Protein™ WesternC™ Pack , Precision Plus Protein WesternC Standards and StrepTactin-HRP, 50 applications
161-0398	Precision Plus Protein WesternC Value Pack , 250 applications
161-0747	4x Laemmli Sample Buffer , 10 ml
161-0786	Bio-Safe™ Coomassie Stain , 1 L

Coomassie is a trademark of BASF Aktiengesellschaft.

Tween is a trademark of ICI Americas Inc.

This product is sold under license from Life Technologies Corporation, Carlsbad, CA, for use only by the buyer of the product. The buyer is not authorized to sell or resell this product or its components.

For more information, go to www.bio-rad.com.

Precision Plus Protein™ Dual Xtra Standards Instruction Manual

Single unit
Catalog #161-0377

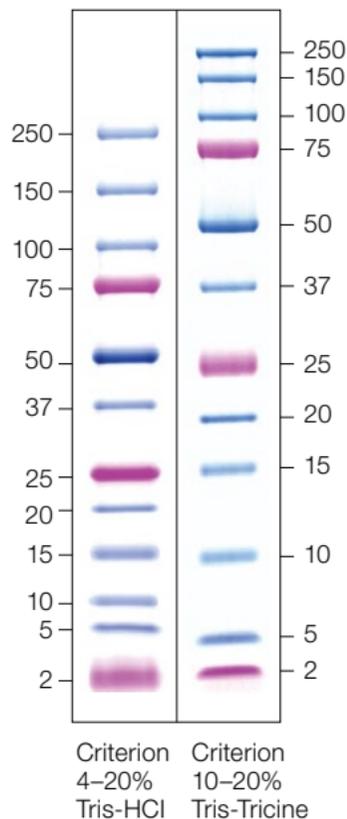
5-Pack value pack
Catalog #161-0397

Product shipped at
room temperature.

Store at 4°C for 6 months
or -20°C for 12 months.

BIO-RAD

A representative lot of Precision Plus Protein Dual Xtra standards on a Criterion™ 4–20% Tris-HCl gel and a Criterion 10–20% Tris-Tricine gel



Precision Plus Protein standards are the latest generation of recombinant proteins designed to provide a ladder of convenient, consistent sizes. These standards continue the tradition of accuracy and ease of use begun by Precision Protein™ standards, while also providing instant orientation, even greater accuracy, particularly in the 10–25 kD range, and two-color convenience.

Precision Plus Protein Dual Xtra standards provide a 12-band, extended-range recombinant ladder with blue and pink bands from 2 kD to 250 kD. The extended range allows for accurate MW estimation on a wide range of gel formulations. The colored bands allow easy band referencing and blot orientation.

Note: Prestained standards may fade during blocking, antibody incubation, or washing steps due to the use of Tween 20 in buffers. For other options, contact Bio-Rad Technical Support at 1-800-424-6723.

Product Description

Precision Plus Protein Dual Xtra standards offer 12 distinct, prestained protein bands with a molecular weight of 2, 5, 10, 15, 20, 25, 37, 50, 75, 100, 150, and 250 kD. The 2, 25, and 75 kD bands are stained pink for easy band referencing and blot orientation. The remaining bands, including a more intense 50 kD reference band, are stained blue.

Recombinant prestained protein standards are carefully engineered for precise and accurate molecular weight estimation on a wide range of gel percentages and formulations. The staining process has been optimized to guarantee the same molecular weight with each lot.

Molecular Weight Estimation

The molecular weights of Precision Plus Protein Dual Xtra standards are confirmed by mass spectrometry and migration in an SDS-PAGE system to ensure accuracy. The Precision Plus Protein Dual Xtra standards are linear on a range of gel types ($R^2 > 0.95$). Refer to bulletin 3133 for instructions on estimating molecular weight using Precision Plus Protein standards.

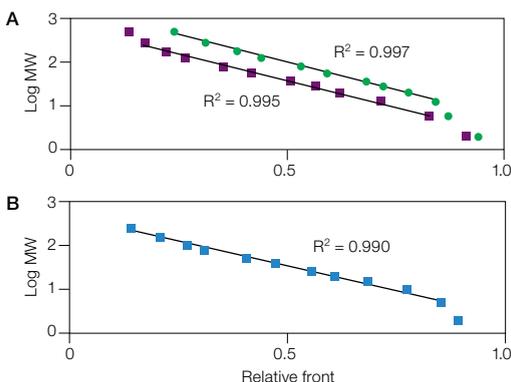


Fig. 1. Linearity of Precision Plus Protein Dual Xtra standards run on gels with different chemistries. Standards were run on Criterion 4–20% Tris-HCl gels (●) and 10–20% Tris-Tricine gels (■) as shown in **A** or on Criterion XT 4–12% Bis-Tris (MES) gels (■) as shown in **B**. R^2 values of >0.99 are typical for the 10–250 kD bands on the Tris-HCl gels, 5–150 kD bands on the Tris-Tricine gels, and 5–250 kD bands on the Bis-Tris (MES) gels. R^2 values of >0.95 can be obtained with all 12 bands on these gel types.

Instructions for Use

Precision Plus Protein Dual Xtra standards are provided in loading buffer and require no dilution.

Before use, allow the tube to reach room temperature and mix thoroughly to fully dissolve any solids that may have precipitated. Do not heat the product above room temperature.

Decreased run times may be required to visualize the 2 and 5 kD bands of the standard on gel formulations capable of resolving low-molecular weight proteins and peptides. For optimal results, run the SDS-PAGE gel until the lowest pink band of the standard is approximately 1 cm from the bottom of the gel and fix the gel in an appropriate fixative solution prior to staining and destaining to retain the 2 and 5 kD bands. To obtain the gel types shown in Figure 1, fix the gels in Coomassie Brilliant Blue R-250 destaining solution (catalog #161-0438) for 45–60 min, rinse in deionized water, and then stain in Bio-Safe Coomassie stain (catalog #161-0786) for 60–90 min. This treatment successfully retains the 2 kD band even when left to destain in water overnight. Depending on the gel type and percentage of acrylamide, more permanent fixative agents (for example glutaraldehyde solution) may be more appropriate.

Recommended Loading Volumes

Load Volume	Application
5 μ l	Blotting mini (8.3 W x 6.4 L cm) and midi (13.3 W x 8.7 L cm) gels, monitoring transfer
10 μ l	Mini and midi gel electrophoresis
20 μ l	Large (18.3 W x 19.3 L cm) gel electrophoresis

Specifications

Catalog #	161-0377, single unit 161-0397, 5-pack value pack
Volume	500 μ l
Number of applications	50, single unit 250, 5-pack value pack
Loading buffer	30% (w/v) glycerol, 2% SDS, 62.5 mM Tris, pH 6.8, 50 mM DTT, 5 mM EDTA, 0.02% NaN_3 , 0.01% bromophenol blue
Shelf life	6 months at 4°C or 12 months at -20°C; if the product has been stored as directed for longer than 12 months, the shelf life may be extended by adding dithiothreitol (DTT) to 50 mM