

## Related Products for Electrophoresis

| Catalog # | Description  |
|-----------|--|
| 161-0363  | <b>Precision Plus Protein Unstained Standards, 1,000 <math>\mu</math>l</b>   |
| 161-0396  | <b>Precision Plus Protein Unstained Standards Value Pack, 5 x 1000 <math>\mu</math>l</b>                                       |
| 161-0373  | <b>Precision Plus Protein All Blue Standards, 500 <math>\mu</math>l</b>  |
| 161-0393  | <b>Precision Plus Protein All Blue Standards Value Pack, 5 x 500 <math>\mu</math>l</b>   |
| 161-0374  | <b>Precision Plus Protein Dual Color Standards, 500 <math>\mu</math>l</b>  |
| 161-0394  | <b>Precision Plus Protein Dual Color Standards Value Pack, 5 x 500 <math>\mu</math>l</b>                                       |
| 161-0377  | <b>Precision Plus Protein Dual Xtra Standards, 500 <math>\mu</math>l</b>   |
| 161-0397  | <b>Precision Plus Protein Dual Xtra Standards Value Pack, 5 x 500 <math>\mu</math>l</b>  |
| 161-0385  | <b>Precision Plus Protein™ WesternC™ Pack</b> , Precision Plus Protein WesternC Standards and StrepTactin-HRP, 50 applications |
| 161-0398  | <b>Precision Plus Protein WesternC Value Pack</b> , 250 applications   |
| 161-0747  | <b>4x Laemmli Sample Buffer</b> , 10 ml  |
| 161-0786  | <b>Bio-Safe™ Coomassie Stain</b> , 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](http://www.bio-rad.com).

## Precision Plus Protein™ Kaleidoscope™ Standards Instruction Manual

Single unit

Catalog #161-0375

5-Pack value pack

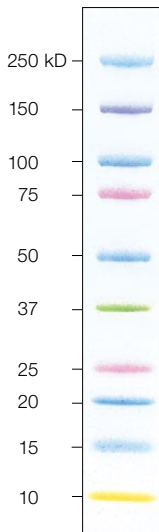
Catalog #161-0395

Product shipped at  
room temperature.

Store at  $-20^{\circ}\text{C}$  for 12 months.

**BIO-RAD**

Representative lot  
of Precision Plus  
Protein Kaleidoscope  
prestained standards  
on a Criterion™  
4–20% Tris-HCl Gel



**The 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.

**The Precision Plus Protein Kaleidoscope standards** provide a broad range recombinant ladder with multiple colors that allow for 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

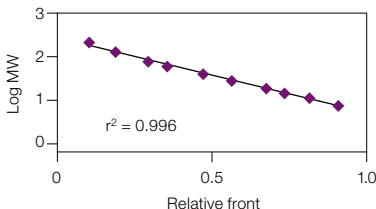
Precision Plus Protein Kaleidoscope standards contain ten protein bands of 10, 15, 20, 25, 37, 50, 75, 100, 150, and 250 kD.

Recombinant prestained protein standards are carefully engineered for precise and accurate molecular weights. The staining process has been optimized to guarantee the same electrophoretic molecular weight with each lot. Traditional prestained proteins, on the other hand, are blended from naturally occurring proteins. They have an inherent variability in the amount and location of dye that covalently binds to the protein; this produces diffuse, broader bands than those of the recombinant prestained standards and the resulting molecular weights vary from lot to lot.

## Molecular Weight Estimation

The molecular weights of Precision Plus Protein Kaleidoscope standards are confirmed by migration in a Laemmli SDS-PAGE system. Using Precision Plus Protein Kaleidoscope standards, the molecular weight of an unknown protein can be assessed at an accuracy of 95%. For electrophoretic determination of molecular weights at an accuracy of >95%, Precision Plus Protein Unstained standards (catalog #161-0363) should be used.

These standards are also compatible with the XT buffer system, but should only be used for molecular weight estimation. For molecular weight determination on XT gels, use the Precision Plus Protein Unstained or All Blue standards.



**Fig. 1.  $r^2$  plot for Precision Plus Protein Kaleidoscope standards determined on a Criterion 4–20% gel.**  $r^2$  values >0.99 are typical for Precision Plus Protein Kaleidoscope standards.

## Instructions for Use

Precision Plus Protein Kaleidoscope standards are provided in loading buffer, ready to load, with no dilution required. Allow the tube to reach room temperature and thoroughly mix before use. This will ensure that any solids that may have precipitated have returned to solution. Do not heat the product above room temperature.

## Recommended Loading Volumes

| Load Volume | Application   |
|-------------|---|
| 5 $\mu$ 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 $\mu$ l  | Mini and midi gel electrophoresis   |
| 20 $\mu$ l  | Large (18.3 W x 19.3 L cm) gel electrophoresis  |

## Specifications

|                             |   |
|-----------------------------|---|
| Catalog #                   | 161-0375, single unit<br>161-0395, 5-pack value pack  |
| Volume                      | 500 $\mu$ l   |
| Number of applications      | 50, single unit<br>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% $\text{NaN}_3$ , 0.01% bromophenol blue   |
| Shelf life                  | 12 months at $-20^\circ\text{C}$ ; 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 |
| Total protein concentration | 1.5 mg/ml   |