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ProductInformation

FLUORESCENT MOLECULAR WEIGHT MARKERS
High Molecular Weight Standards F3526
Low Molecular Weight Standards F3401
Individual Molecular Weight Standards M0163, G7279, A2065, A2190, C1311, T9416, L8151, and A2315

TECHNICAL BULLETIN

Product Description
Sigma Fluorescent Molecular Weight Markers are prepared by conjugation of a highly fluorescent dye with proteins having a wide range of molecular weights. The conjugates produce sharp bands in SDS-polyacrylamide gel electrophoresis and after transfer to membranes. Fluorescent Molecular Weight Markers are easily visualized with UV light. Markers may also be visualized with standard brilliant blue stains, but with destruction of fluorescence.

Preparation Instructions
After reconstitution with 250 µl of deionized water, each vial contains a protein solution in 62 mM Tris, pH 8.0, 1mM EDTA, 3% sucrose, 0.5% dithiothreitol, 2% SDS, and 0.005% bromophenol blue.

(See Table A for the proteins and their corresponding molecular weights contained in each Fluorescent Molecular Weight Marker product.)

Storage/Stability
Store in the dark at –20 °C or below.
After reconstitution, aliquot and freeze; repeated freezing and thawing is not recommended.

Procedure
1. Reconstitute each vial with 250 µl of deionized water and vortex for a few seconds to assure the material is completely dissolved; aliquot and freeze immediately. Store in a container protected from light.

2. Incubate the markers in a 65 °C water bath for 5 minutes immediately before loading onto the gel(s).
   Note: Avoid boiling the sample because it may promote degradation of the marker.

3. For a standard size gel (16 x 18 cm), load 10-20 µl of marker(s) per well; for a mini gel (10 x 10 cm), load 5-10 µl of marker(s) per well.

4. During or after electrophoresis, marker bands can be visualized on gels or transfer membranes using a UV lamp or a UV transilluminator.
   Note: Due to the large size of myosin, it will not transfer completely to membranes. Band intensity will vary with transfer conditions.

Table A.

Molecular Weights of Proteins in Sigma Fluorescent Molecular Weight Markers.

Protein Name	**Molecular Weight (Daltons)**	**High MW (F 3526)**	**Low MW (F 3401)**
Myosin, rabbit muscle (M 0163)	205,000	x	
ß-Galactosidase, *E. Coli* (G 7279)	116,000	x	
Albumin, bovine serum (A 2065)	66,000	x	
Alcohol Dehydrogenase, equine liver (A 2190)	39,000	x	x
Carbonic Anhydrase, bovine erythrocyte (C 1311)	29,000	x	x
Trypsin Inhibitor, soybean (T 9416)	20,100	x	x
a-Lactalbumin, bovine milk (L 8151)	14,200		x
Aprotinin, equine liver (A 2315)	6,500		x

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