

Low Molecular Weight Protein Marker

Description:

The Low Molecular Weight Protein Marker for SDS Electrophoresis is a liquid mixture of six purified proteins ranging from 14000 to 96000 Dalton when used in denaturing polyacrylamide. This marker is intended for use in molecular weight estimation in the presence of the detergent sodium dodecyl sulfate (SDS).

Components:

Phosphorylase b: 100 µg, 97 (kDa), (rabbit muscle)

Albumin: 100 µg, 66 (kDa), (bovine serum)

Ovalbumin: 220 µg, 45 (kDa), (chicken egg white)

Carbonic anhydrase: 100 µg, 30 (kDa), (bovine erythrocyte)

Trypsin inhibitor: 75 µg, 20.1 (kDa), (soybean)

Lysozyme: 100 µg, 14.4 (kDa), (egg white)

Recommendations for loading:

1. Thaw the marker at 37 °C for a few minutes.
2. Mix one part of LMW protein marker with one part of 2x sample buffer.
3. Heat this tube at 95 °C for 5 minutes to completely denature proteins.
4. Load the following volumes of the marker on SDS-PAGE:
 - 10 µl per well for mini-gels;
 - 15 µl per well for large gels.
5. If you want to store this sample buffer-diluted marker, chill on ice.
6. Make aliquots and keep them at -20 °C while not in use (additional heating is not required; for next uses, simply thaw the aliquots at 37-40 °C for a few minutes and mix until the solution is homogeneous and clear).

Standard 2x Sample buffer:

0.125 M Tris-HCl pH 6.8, 4% SDS, 20% (v/v) glycerol, 2% 2-ME and 0.01% Bromophenol blue.

Mw (kDa) 12.5%

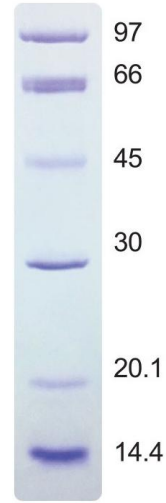


Figure: LMW protein marker stained with Coomassie Brilliant Blue. 5 µl of marker (10 µl of sample buffer diluted) were loaded on a 12.5% polyacrylamide gel. The gel was run at a constant current of 120 V for 2 hours on a Bio-Rad mini protean electrophoresis unit.

Storage:

Store at -20 °C. To avoid several Freeze-thaws, the LMW protein marker should be aliquoted after the first thaw and stored at -20°C. All reagents are stable for up to 24 months under proper storage conditions.