

Bio Basic prestained protein ladder introduction

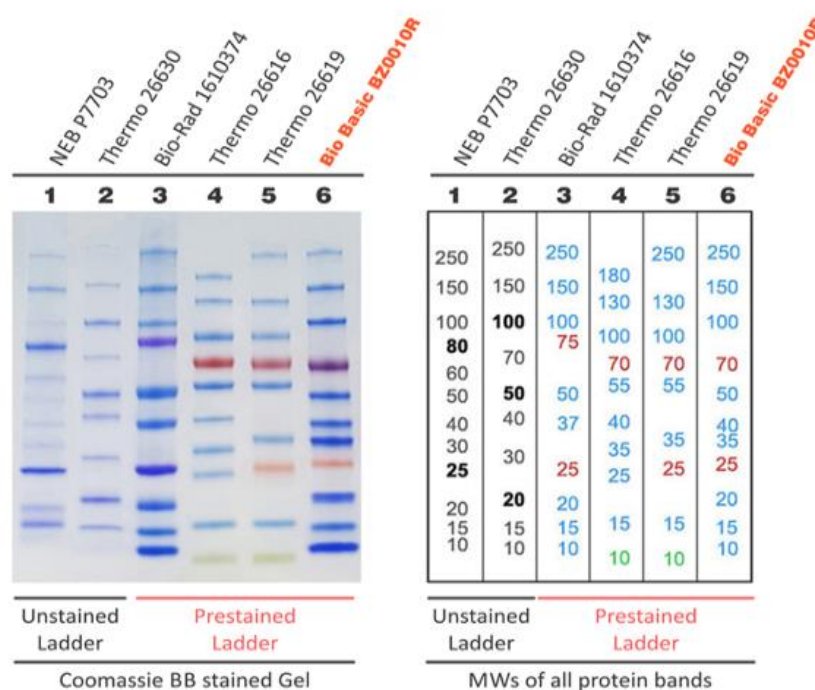
Bio Basic prestained protein ladder is designed for estimating the approximate size of separated proteins on SDS-PAGE gel. The ladders are a mixture of recombinant proteins ranging from 10 kD to 250 kD. Red or green bands at 70 kD and 25 kD provide easy references for molecular weight identification. The molecular weights of the prestained ladders are confirmed using the Tris-Glycine SDS-PAGE system with an accuracy of >95% by using unstained protein ladders. The protein ladders are highly stable with minimal band broadening during storage. Products are conveniently packaged and ready to use, with no heating, diluting or additional reducing agent required.

Bio Basic Prestained protein ladder has high size precision

To perform molecular weight (MW) size precision evaluation, both unstained and prestained ladders were resolved on a 4-15% gradient SDS-PAGE Gel (BioRad #4561083) followed by Coomassie BB staining (left panel). MWs of all protein bands were indicated at their migration positions (right panel). As seen in lane 3, 4 and 5, some prestained protein bands show significant MWs inconsistencies between BioRad's and Thermo's products. Similar inconsistent bands are also observed between two ladders from the same manufacturer (Thermo #26616 and #26619). Generally, unstained protein ladders are considered to be more precise. Here, two unstained ladders (Thermo #26630 and NEB #7703, a third-party's product) were included as standard references (lane 1&2). When compared with unstained ladders, there are obvious imprecise prestained bands in both popular brands' products. Interestingly, the MWs of Thermo's prestained ladders (#26616 and #26619) do not match their own unstained protein ladder (#26630). There are no significant imprecise bands in the Bio Basic ladder (lane 6). It should be noted that prestained ladders were originally designed for approximative MW reference and therefore, neither represent an absolute standard.

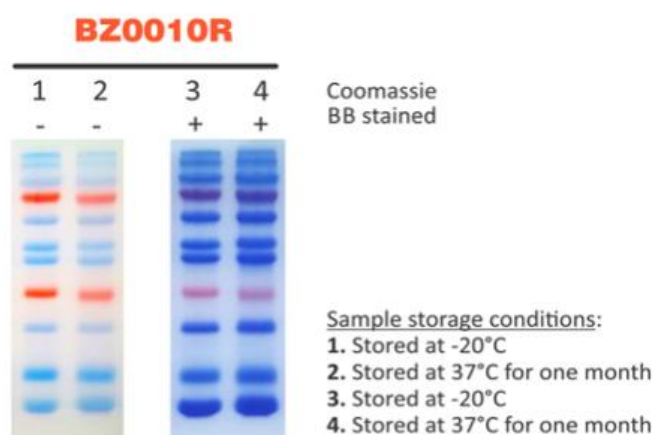
*Normally, all prestained protein ladders have lot-to-lot variation. This evaluation only represented the tested lot and did not intend to conclude a judgement of all other lots of listed brands' products.

**The evaluation was performed on Tris-Glycine buffer system. The mobility of prestained proteins can vary in different SDS-PAGE buffer systems.



Storage stability assay

12.5% Laemmli SDS-PAGE Gel



Shipment and storage

Products are shipped on ice pack and should be store frozen upon receipt. Occasional thawing partly during shipping will not affect the quality and performance because our protein ladders are substantial stable in ambient temperature. We recommend to store ladders at -80°C for long term storage. When you subpackage, product should be equilibrated at 4°C overnight and further let it stay at room temperature until completely thawed. Mix thoroughly to make sure no insoluble precipitate occurs. If necessary, warm it at 37°C to dissolve any precipitate (no heat!). Aliquoting recommended. Store all aliquots as above or at -20°C for one year.