Fast Coomassie Blue Protein Gel Stain

Cat#	Item	Size
FBGS-1L	Fast Coomassie Blue Protein Gel Stain	1000 mL

Fast Coomassie Blue protein gel stain is a ready-to-use, super-fast and sensitive Coomassie blue dye to stain protein polyacrylamide gels. Protein gels can be stained in 15 minutes. It detects protein levels as low as 5 ng per band. No gel shrinkage or protein methylation/acetylation are detected. The stain is also compatible with protein Mass Spectrometry

Features

- Super fast staining – Results in 15 minutes
- Simple – No fixing or destaining needed
- High sensitivity – 5ng bands detectable
- Clear background – High signal/noise ratio
- Safe composition – Nontoxic; no fume hood or solvent disposal required
- Methanol free – No gel shrinkage or protein methylation
- Acetic acid free – No protein acetylation
- Mass spectrometry: Fully compatible with downstream trypsin digestion and MS/MS analysis.

Storage and Stability: Store at 4°C. Reuse is not recommended

Shipping condition: Ambient temperature

Caution: *Fast Coomassie Blue protein gel Stain contains phosphoric acid, a corrosive liquid. Wearing protective gloves.*

Staining Protocol:

1. After electrophoresis, carefully remove the gels from the cassettes or glass plates and transfer them into a staining dish filled with Ultrapure water (ddH_2O).
2. Wash the gels three times with Ultrapure water for 5-10 minutes on a horizontal shaker (insufficient washing causes poor sensitivity because the remaining SDS on the gels disturbs the bounding of the dye to the protein).
3. Shake the Coomassie solution before use to disperse the colloidal particles evenly.
4. Incubate the gels well covered with the Fast Coomassie solution by agitation on a shaker. Be sure that the gel moves freely in stain to facilitate diffusion. Typically, ~20 mL is needed to cover the gel. Gently agitate/rock at room temperature for **15 minutes**. Protein bands will appear rapidly as the dye binds. *Note: after 10 minutes you can see first protein bands or spots appearing, within 2 hours of incubation about 80% staining to its maximum level is completed. For nearly 100% staining, overnight incubation is recommended.*
5. Photograph your gel when the required intensity has been achieved. Gels can be kept in staining solution but ensure that the gel remains covered with liquid. Alternatively, the gel can be stored in ultrapure water after staining for 1 hour.

Protocol for gel drying:

1. Ensure that the gel has been staining for about 1-2 hours.
2. Submerse the gel in approximately 100 mL ultrapure water at ~70°C (heat in a microwave oven). Incubate for at least 1 hour while gently rocking. Optionally, adsorbent paper or paper towels can be added. Gels can be incubated overnight in ultrapure water.
3. Incubate the gel in a gel drying solution (e.g. 4% glycerol, 20% ethanol in water) for 2 minutes. Incubation of any Coomassie-stained gel in an alcohol solution will eventually result in destaining of the bands, so avoid incubation for longer than 5 minutes.
4. The gel is now ready for drying between wet cellophane membranes.

Protocol for destaining protein bands for MS analysis:

1. Excise the protein band of interest and transfer to a clean sample tube.
2. Add 1 ml of 30% ethanol or 30% acetone or 30% acetic acid

   Note: *Acetic acid may result in acetylation*
3. Incubate for 20 min (incubate at 60°C – 70°C to increase the rate of destaining).
4. Decant supernatant and repeat steps 2 & 3 at least 3 times, or until gel is clear.

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