Fast Blue Protein Gel Stain Solution (TBS5055)

Catalog	Unit Size
TBS5055-100ML	100 ml
TBS5055-1000ML	1000 ml

Description

Tribio Fast Blue Protein Gel Stain Solution is a ready-to-use reagent for sensitive detection of proteins in polyacrylamide gels, as well as on nitrocellulose and PVDF membranes. It selectively binds to proteins while maintaining low background, allowing clear visualization of protein bands. Bands appear in real time during staining, so the process can be stopped once the desired intensity is reached. No destaining step is required, although a brief water rinse can further enhance sensitivity. The low-pH formulation enables detection of as little as 5 ng of protein.

Synonyms

- EZBlue Gel Staining Reagent
- InstantBlue-type stain
- Blue protein stain for SDS-PAGE

Application

- SDS-PAGE protein detection
- Analysis of protein purity
- Quantitative estimation of protein bands (semi-quantitative)
- Preparation for downstream mass spectrometry (after destaining or washing)

Main Features

- Ready-to-use: No preparation required, directly apply to gels.
- Rapid staining: Usually visible within 30–60 minutes.
- High sensitivity: Detects protein bands down to 5–10 ng per band.
- Blue color with low background: Clear visualization of protein bands.

Storage

Store at room temperature.

Procedure

A. SDS-PAGE Gel Preparation and Staining

1. Rinse Gel
   - After electrophoresis, place the gel in a clean container.
   - Rinse 3 times for 5 minutes each with plenty of water to remove residual SDS.
2. Stain Gel
   - Add fast Blue Protein Gel Stain Solution (20–40 mL for a mini gel, adjust for larger gels).
   - Gently shake and monitor band development.
   - Staining typically reaches maximum intensity in 45–60 minutes.
   - Overnight staining is okay; it won't increase background.
3. Wash Gel with Water
   - Remove excess SDS by washing with water until the background clears.
   - Change water frequently to improve contrast.
   - Full destaining usually takes 1–2 hours at room temperature.
   - Thicker gels (>1 mm) may remain slightly blue and need longer washing.
   - Optional: gels can be left overnight without losing sensitivity.

B. Native PAGE Gel Staining

1. Rinse Gel: Briefly rinse the gel once with water for 5 minutes.
2. Fix Proteins (if needed)
   - Native gels run in Tris-glycine buffer usually do not require fixation.
   - If staining is weak or background is high, repeat the run and fix the gel using 50% methanol or 10% acetic acid.
3. Rinse After Fixing: Wash the gel for 10–15 minutes with plenty of water to remove any residual fixative before staining.

4. Stain and Destain: Follow the same staining and water wash steps as described for SDS-PAGE gels (steps 4 and 5).

C. Staining Proteins on PVDF or Nitrocellulose Membranes (Western Transfer)

1. Protein Transfer: Transfer proteins from the gel onto a PVDF or nitrocellulose membrane using your standard method.
2. Rinse Membrane: Briefly rinse the membrane in water for 1–2 minutes.
3. Staining and Water Wash: Stain the membrane and rinse with water following the same method as steps 4 and 5 for SDS-PAGE gels.
4. Optional Methanol Wash for Background Reduction
   - To reduce background staining, wash the membrane with a 20% methanol solution.
   - Replace the methanol solution every 5–10 minutes until the desired background is achieved.
   - Use just enough solution to allow the membrane to float freely.
   - Avoid excessive washing, as it may remove dye from the protein bands.

Relative Products

TBS2005	Protein Assay Kit
TBS5001	Protein Lysis Buffer
TBS5003-0	1xPBS
TBS5011-10	10 x PBST
TBS5008	TBS
TBS5008T	TBST
TBS5037	Urea Solution (8M)
TBS5038	Ammonium Sulfate Solution
TBS5040	0.5M EDTA Solution
TBS5041	MOPS Buffer
TBS5048	2% BSA in PBS
TBS5049-2	2% BSA in TBST
TBS5049-5	5% BSA in TBST
TBS5057	0.1% BSA ELISA Assay Buffer
TBS5077	Antigen retrieval Citrate Solution-pH6.0
TBS8024	MCF10 Cell Complete Medium
TBS8027	EMEM with L-Glutamine
TBS8030	McCoy's 5A Medium
TBS8031	30% BSA Solution in DPBS
TBS8047	MCF-7 Cell Complete Medium
TBS8056	LB Medium
TBS8057	SOB Medium
TBS8058	SOC Medium
TBS8059	2x YT Medium
TBS8060	Terrific Broth (TB) Medium
TBS8061	DMEM-high Glucose Medium

This product is for research use only.