Cat.:BR4C351

5× SDS-PAGE Protein Loading Buffer

V01

BIORI BIOTECH

Product Description

5× SDS-PAGE Protein Loading Buffer is a 5× concentrated protein sample loading buffer. SDS binds to proteins and confers a strong negative charge on protein-SDS complexes, thereby masking the intrinsic charge differences among proteins. At the same time, SDS disrupts intra- and intermolecular hydrogen bonds and denatures the secondary and tertiary structures of proteins. The reducing agent in the loading buffer also cleaves disulfide bonds between cysteine residues and disrupts protein conformation. As a result, structural differences among proteins are minimized, and migration of protein bands during electrophoresis depends mainly on molecular weight.

This product is a denaturing and reducing protein loading buffer formulated with an updated composition that helps maintain a neutral pH after sample boiling, thereby reducing the risk of protein degradation. The new-generation reducing agent provides strong reducing performance while avoiding the odor associated with β-mercaptoethanol or DTT. After storage at -20°C, the product thaws rapidly to reduce waiting time. During sample loading, the sample settles quickly and is less likely to float out of the wells.

Components

Components	BR4C351-01	BR4C351-02	BR4C351-03
5× SDS-PAGE Protein Loading Buffer	5 mL	15 mL	75 mL

Storage

Store at -20±5°C.

Notes

1. For Research Use Only. Not for use in diagnostic procedures.
2. Mix thoroughly before use. Avoid repeated freeze-thaw cycles.
3. This product contains denaturing agents and is not suitable for electrophoresis under native conditions.
4. For your safety and health, please wear a lab coat and disposable gloves when operating.

Protocol

1. Before use, thaw the product at room temperature. Mix the protein sample with 5× SDS-PAGE Protein Loading Buffer at a ratio of 4 μL protein sample to 1 μL 5× SDS-PAGE Protein Loading Buffer.
2. Heat the mixture in a boiling water bath or at 100°C for 5-10 min to fully denature the proteins.
3. After heating, centrifuge at high speed for 5 min. The supernatant can then be used directly for electrophoretic analysis. If no insoluble precipitate is present after the loading buffer is added, a brief spin is sufficient to collect the sample at the bottom of the tube. If substantial condensation forms on the inner side of the tube cap after heating, gently flick the tube to mix the condensate back into the sample before high-speed centrifugation. This helps avoid uneven sample concentration during loading.
4. Electrophoresis can usually be stopped when the blue tracking dye reaches the bottom of the gel.

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