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A Geno Technology, Inc. (USA) brand name

Reversible Zinc Stain™

(Cat. # 786-32ZN, 786-32DSZN)

INTRODUCTION

The Reversible Zinc Stain™ is a single step stain for the rapid detection of proteins fractionated by PAGE (native gels or SDS denatured gels). No destaining is necessary. The stain is based on the interaction of Zinc ions with polyacrylamide and proteins. The stain works by depositing zinc metal precipitate in the gel, which turns the gel opaque white, while the SDS coating on the proteins prevents the stains from binding to the proteins. A negative image is produced; clear protein bands are detected against a semi-opaque white polyacrylamide background. Protein bands are visualized in as little as 10-15 minutes. The sensitivity of the Reversible Zinc Stain™ is 8-12ng and does not interfere with the electroelution of proteins or alter their biological properties. Gels stained with the Reversible Zinc Stain™ can be destained in 5 minutes before the transfer or electroelution of proteins.

This stain works with native as well as SDS denatured gels and gels containing Glycine, Tricine and a variety of primary-amine containing buffers.

SENSITIVITY

As low as 10ng of BSA is visible in 12% acrylamide gel. Gels of less than 12% concentration will have reduced sensitivity because of increased pore sizes, which lends itself to diffuse protein bands. The kit components are suitable for 25 mini gels.

ITEM(S) SUPPLIED

Description	Cat. # 786-32ZN	Cat. # 786-32DSZN
Reversible Zinc Stain™ [10X]	125ml	-
Zinc-Reagent-I [10X]	125ml	-
Zinc-Reagent-II [10X]	125ml	-
Destaining Solution Zn [10X]	125ml	500ml

STORAGE CONDITIONS

The kit is shipped at ambient temp. Upon arrival, store at room temperature and is stable for 1 year, when stored and handled properly.

STAINING PROTOCOL

1. For one mini gel, use 50ml diluted 1X reagents. Use 100ml for larger gels or several mini gels.
2. After electrophoresis, rinse gel 5-6 minutes with 50ml 1X Zinc-Reagent-I (5ml 10X Reagent-I in 45ml DI water).
   NOTE: *If the gel contains glycine, Tricine, or a variety of primary-amine containing buffers, incubate and wash twice, 10 minutes each in 1X Reagent-I.*
3. Immerse gel in 50ml 1X solution of Zinc-Reagent-II (5ml 10X Reagent-II in 45ml pure water). Gently rock tray for 15 minutes at room temperature. For native gels, incubate for 20 minutes.
4. Wash gel 10 seconds with water. Add 1X solution of Reversible Zinc Stain™ (5ml 10X in 45ml pure water). In a few seconds, a white background starts to develop while the protein bands remain transparent. This step must not be extended longer than 40-45 seconds. Reversible Zinc Stain™ should rapidly be poured off after 40-45seconds. Longer incubation in Reversible Zinc Stain™ may give cloudy and high background.

Visualizing Gel Bands

Transfer the gel to a glass plate. Place a dark (black) sheet of paper under the glass plate and shine a bright light at an oblique angle above the gel. Protein bands will appear as dark bands against an opaque white background.

DESTAINING

Destaining is not necessary for visualizing protein bands. However, gels may be de-stained for later transfer or electroelution.

Destaining Protocol

1. Dilute the Destaining Solution 10 fold with deionized water (e.g., 5ml Destaining Solution in 45 ml DI water). Use 50ml Destaining solution per mini-gel and 100 ml for larger gels or several mini-gels.
2. Wash gel in deionized water twice, 5 minutes each. Immerse the gel in diluted (1:10) Destaining solution. Gently rock the tray for 5-10 minutes.
3. Wash the gel in deionized water twice.
4. After destaining, the gel is ready for silver staining, blotting, or other analysis. For Coomassie staining, such as RAPID*stain*™, destaining is not necessary. RAPID*stain*™ also acts as destaining solution. After destaining, equilibrate the gel or gel slice with elution or transfer buffer for 15 minutes. Electro-elute using the same buffer.

RELATED PRODUCTS

Download our Protein Cross-linkers Handbook.
http://info.gbiosciences.com/complete-protein-cross-linkers-handbook/
For other related products, visit our website at www.GBiosciences.com or contact us.

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