

Stains All Gel Staining Kit for Acidic Proteins

Catalog # PMC-AK02-COS

For research use only
Not for diagnostic use

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Introduction

Proteins that regulate bone mineralization such as osteocalcin, osteopontin, and BSP II, are abundant in bones and teeth. These acidic proteins are difficult to detect by conventional staining methods of SDS-PAGE gels.

Our Stain All kit is specifically designed to stain strongly acidic proteins in SDS-PAGE gels. The color of the protein band varies depending on the protein's isoelectric point (pI) and chemical modifications like glycosylation and phosphorylation.

Components

Store kit components at room temperature

- Stain Stock 40 ml
- Buffer 2 x 200 ml

1 kit can stain 20 mini slab gels

Additional Materials May Be Required

- Pipet
- Glass dish for staining
- 25% isopropanol
- Deionized water
- Platform shaker
- Aluminum foil

Reagent preparation

1. Stain Solution (prepare immediately prior to use)
 - a. Prepare Stain Solution for 1 gel by diluting 2 ml of Stain Stock with 18 ml of buffer.
 - b. Protect the Stain Solution from light.

Protocol

Steps to stain 1 mini slab gel

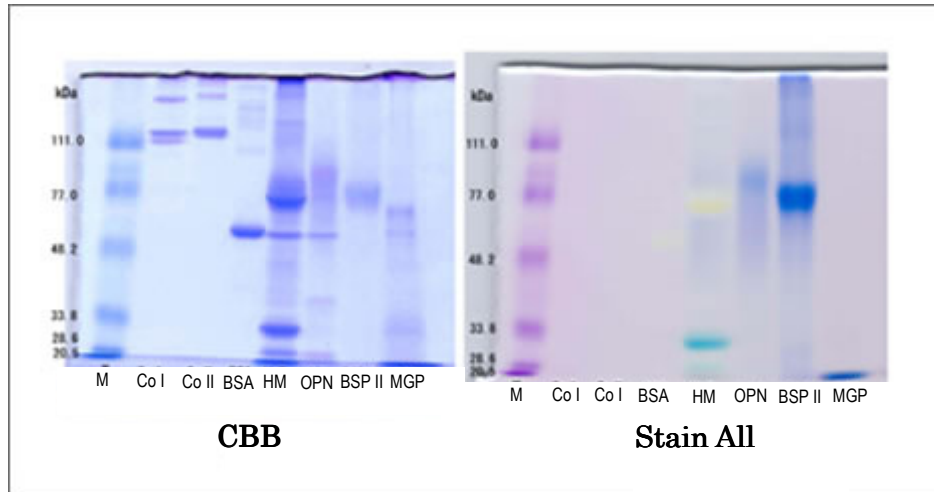
1. Fix the SDS-PAGE gel in 20-30 ml of 25% isopropanol. Shake for 20 minutes.
2. Decant the isopropanol and repeat step 1. Step 1 should be repeated for a total of 4 times to completely remove SDS. Alternatively, soak the gel overnight in 25% isopropanol.

Note: Any remaining SDS in the gel will react with the Stain Solution and interfere with protein staining.

3. Decant the isopropanol then soak the gel in deionized water for 10 minutes.

4. Replace with fresh water and repeat step 3 for a total of 4 times.
5. Decant water and add 20 ml of prepared Staining Solution.
6. Cover dish with aluminum foil to protect from light. Shake for 3 hours.
7. Decant Stain Solution and wash the gel in deionized water at least 2 times.
8. The red color in the background will fade if the gel is left under natural lighting (sunlight) for approximately 10 minutes. The protein bands of various staining intensities and colors will become more visible.

Example



M: Molecular weight marker	HM: Human milk total protein
Co I: Type I collagen	OPN: Human milk osteopontin
Co II: Type II collagen	BSP II: Bovine bone sialoprotein
BSA: Bovine serum albumin	MGP: Bovine matrix Gla protein

For assistance and ordering please contact:

B-Bridge International, Inc.

20813 Stevens Creek Blvd, Suite 200, Cupertino, CA 95014, USA

Tel: 408-252-6200 Fax: 408-252-6220

Email: customersupport@b-bridge.com

www.b-bridge.com