

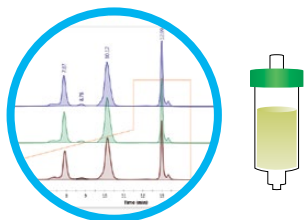
## Protein Purification Workflow with the NGC Chromatography System and Stain-Free Gels



# Following chromatography, quickly confirm the purity and yield of your protein with Stain-Free gels

Visual confirmation of protein purity and yield by gel electrophoresis in less than 30 minutes.

## Simplified protein purification



### CHROMATOGRAPHY

- Use chromatography to separate complex biological mixtures within minutes

## Fast run times



### GEL ELECTROPHORESIS

- Run gels in as few as 20 min
- Available in handcast and precast gel formats

## Quick protein visualization



### GEL IMAGING

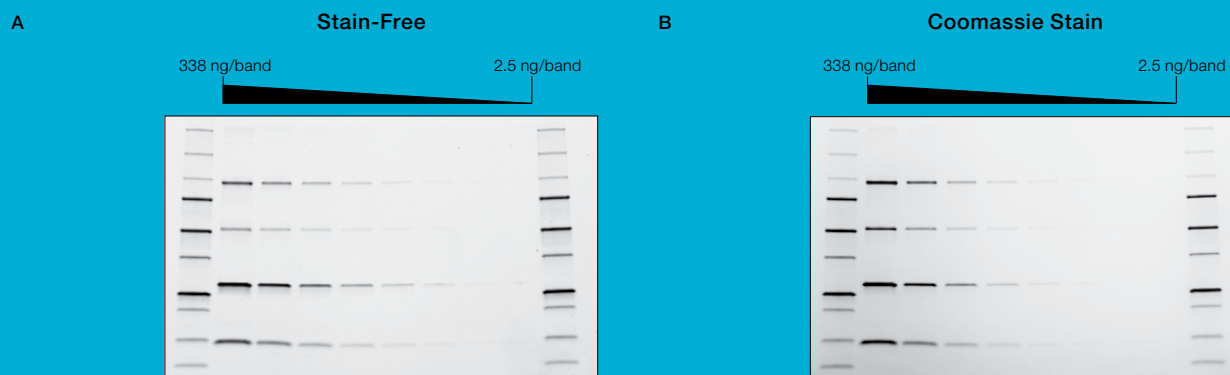
- Visualize proteins in 1 min with any Stain-Free enabled imager
- Eliminates all staining and destaining steps

## How does Stain-Free technology work?

Stain-Free gel chemistry uses a unique compound, which, when activated, reacts with tryptophan residues in your protein sample to emit a fluorescence signal. This allows the quick visualization of proteins without any staining steps.

Learn more!  
**Bulletin 6008**

## Stain-Free imaging is as sensitive as Coomassie staining

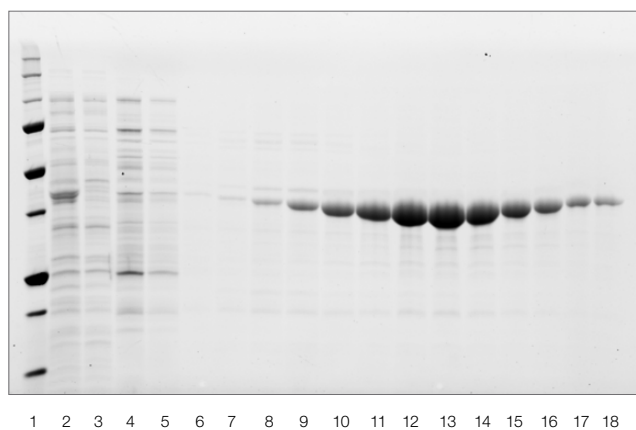
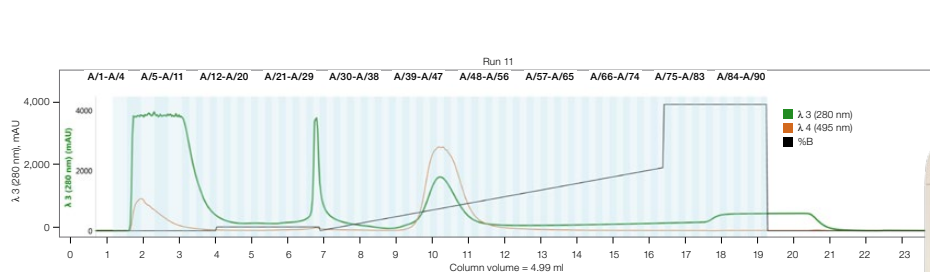


**Stain-Free and Coomassie-stained gels demonstrate comparable sensitivity when visualizing proteins with varying tryptophan content.** 4–20% Criterion TGX Stain-Free Gels were loaded with Precision Plus Protein Unstained Standards and a serial dilution of a protein mixture of four different proteins with varying tryptophan (Trp) content: phosphorylase B (1.4% Trp, 97 kD), glutamic dehydrogenase (0.8% Trp, 56 kD), carbonic anhydrase (2.3% Trp, 31 kD), and lysozyme (3.4% Trp, 14 kD). Gels were run at 300 V for 20 min and immediately imaged with the Gel Doc EZ Imaging System (A). Gels were then stained with Bio-Safe Coomassie Stain and imaged on the Gel Doc EZ Imager (B).

# Confidently determine the next steps in your chromatography workflow

## Use Stain-Free gels to quickly:

- Assess protein purity and yield
- Identify which fractions to pool
- Optimize chromatography runs



### Visual confirmation of chromatography results in a single Stain-Free gel.

An 18-well Any kD Criterion TGX Stain-Free Gel was run at 300 V for 20 min. Lane 1 was loaded with 10 µl Precision Plus Protein Unstained Standards. Lanes 2 and 3 contained 20 µl of a 1:20 dilution of load and flowthrough, respectively. Lanes 4–18 contained 20 µl of each fraction.



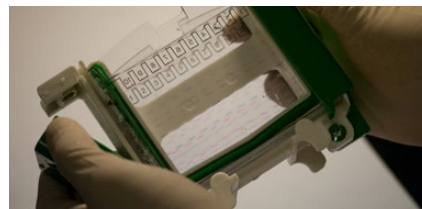
## Stain-Free gels are available in both handcast and precast gel formats

### FastCast Handcast Gels



- Ready to run in as few as 30 min
- Remain fresh for up to 4 weeks at 4°C
- All the benefits of TGX Stain-Free technology, including fast run times and Stain-Free visualization of proteins in 5 min




### Precast gels








- Available in mini and midi precast gel sizes
- Run up to 26 samples on a single gel
- All the benefits of TGX Stain-Free technology, including fast run times and Stain-Free visualization of proteins in 5 min

## Ordering Information

### Mini-PROTEAN TGX Stain-Free Precast Gels

Description	 10-Well 30 µl	 10-Well 50 µl	 12-Well 20 µl	 15-Well 15 µl	 IPG Well 7 cm IPG Strip
7.5% Resolving Gel	4568023	4568024	4568025	4568026	4568021
10% Resolving Gel	4568033	4568034	4568035	4568036	4568031
12% Resolving Gel	4568043	4568044	4568045	4568046	4568041
4–15% Resolving Gel	4568083	4568084	4568085	4568086	4568081
4–20% Resolving Gel	4568093	4568094	4568095	4568096	4568091
8–16% Resolving Gel	4568103	4568104	4568105	4568106	4568101
Any kD Resolving Gel	4568123	4568124	4568125	4568126	4568121

### Criterion TGX Stain-Free Precast Gels\*

Description	 12+2-Well** 45 µl	 18-Well 30 µl	 26-Well 15 µl	 Prep+2-Well* 700 µl	 IPG+1-Well** 11 cm IPG Strip
7.5% Gel	5678023	5678024	5678025	—	—
10% Gel	5678033	5678034	5678035	—	—
12% Gel	5678043	5678044	5678045	—	—
4–15% Gel	5678083	5678084	5678085	5678082	5678081
4–20% Gel	5678093	5678094	5678095	5678092	5678091
8–16% Linear Gradient	5678103	5678104	5678105	5678102	5678101
Any kD Gel	5678123	5678124	5678125	5678122	5678121

\* Criterion TGX Stain-Free Gels are sold as a single gel. \*\* Reference wells accommodate 15 µl of markers/standards.

Catalog # Description

#### Gel Casting Solutions

1610180	TGX Stain-Free FastCast Acrylamide Starter Kit, 7.5%
1610181	TGX Stain-Free FastCast Acrylamide Kit, 7.5%
1610182	TGX Stain-Free FastCast Acrylamide Starter Kit, 10%
1610183	TGX Stain-Free FastCast Acrylamide Kit, 10%
1610184	TGX Stain-Free FastCast Acrylamide Starter Kit, 12%
1610185	TGX Stain-Free FastCast Acrylamide Kit, 12%

#### Catalysts

1610700	Ammonium Persulfate (APS), 10 g
1610801	TEMED, 50 ml

#### Buffers

1610772	10x Tris/Glycine/SDS, 5 L
1610737	2x Laemmli Sample Buffer, 30 ml
1610747	4x Laemmli Sample Buffer, 10 ml

#### Electrophoresis Cells

1656001	Criterion Cell, includes electrophoresis buffer tank, lid with power cables, 3 sample loading guides (12+1-well, 18-well, 26-well)
1658004	Mini-PROTEAN Tetra Cell for Mini Precast Gels, 4-gel system includes electrode assembly, companion running module, tank, lid with power cables, mini cell buffer dam
1658000	Mini-PROTEAN Tetra Cell, 10-well, 0.75 mm thickness; 4-gel system includes 5 combs, 1 set of glass plates, 2 casting stands, 4 casting frames, sample loading guide, electrode assembly, mini cell buffer dam companion running module, tank, lid with power cables
1658001	Mini-PROTEAN Tetra Cell, 10-well, 1.0 mm thickness; 4-gel system includes 5 combs, 1 set of glass plates, 2 casting stands, 4 casting frames, sample loading guide, electrode assembly, mini cell buffer dam companion running module, tank, lid with power cables
1658006	Mini-PROTEAN Tetra Cell, 10-well, 1.5 mm thickness; 4-gel system includes 5 combs, 1 set of glass plates, 2 casting stands, 4 casting frames, sample loading guide, electrode assembly, mini cell buffer dam companion running module, tank, lid with power cables

#### Stain-Free Enabled Imagers

12009077	GelDoc Go Imaging System with Image Lab Touch Software, PC or Mac, includes darkroom, camera, cables
1708265	ChemiDoc XRS+ System with Image Lab Software, PC or Mac, includes darkroom, UV transilluminator, epi-white illumination standard filter, camera, power supply, cables
12003153	ChemiDoc Imaging System, blot and gel imaging system, UV/visible light imaging, chemiluminescence, upgradeable for multiplex fluorescence detection. Includes internal computer, 12" touch-screen display, Image Lab Touch Software, blot/UV/Stain-Free sample tray
12003154	ChemiDoc MP Imaging System, blot and gel imaging system, UV/visible light imaging, chemiluminescence, 5 fluorescence channels (RGB, far red, NIR). Includes internal computer, 12" touch-screen display, Image Lab Touch Software, blot/UV/Stain-Free sample tray

Catalog # Description

#### Mini-PROTEAN and Criterion Empty Cassettes and Combs

4560003	Mini-PROTEAN Empty Cassettes, 1.0 mm thick, 10-well, pkg of 50
4560005	Mini-PROTEAN Empty Cassettes, 1.0 mm thick, 12-well, pkg of 50
4560006	Mini-PROTEAN Empty Cassettes, 1.0 mm thick, 15-well, pkg of 50
4560013	Mini-PROTEAN Combs, 10-well, pkg of 50, for use with 4560003
4560015	Mini-PROTEAN Combs, 12-well, pkg of 50, for use with 4560005
3459901	Criterion Empty Cassettes, 1 mm, 12+2-well, pkg of 10
3459902	Criterion Empty Cassettes, 1 mm, 18-well, pkg of 10
3459903	Criterion Empty Cassettes, 1 mm, 26-well, pkg of 10
3459904	Criterion Empty Cassettes, 1 mm, prep+2-well, pkg of 10
3459906	Criterion Empty Cassettes, 1 mm, IPG+1-well, pkg of 10

#### Protein Standards

1610393	Precision Plus Protein All Blue Standards Value Pack, 5 x 500 µl, 250 applications
1610396	Precision Plus Protein Unstained Standards Value Pack, 5 x 1,000 µl, 500 applications

#### NGC Medium Pressure Chromatography Systems and Modules

7880001	NGC Quest 10 System
7880003	NGC Quest 10 Plus System
7880002	NGC Quest 100 System
7880004	NGC Quest 100 Plus System
7880005	NGC Scout 10 System
7880007	NGC Scout 10 Plus System
7880009	NGC Discover 10 System
7884010	NGC Buffer Blending Valve Module
7884006	NGC Inlet Valve Module
7884011	NGC pH Valve Module
7884012	NGC Column Switching Valve Module (10 ml)
7884026	NGC Column Switching Valve Module (100 ml)
7884013	NGC Outlet Valve Module

#### ENrich High-Resolution Ion Exchange Columns

7800001	ENrich Q, 1 ml
7800003	ENrich Q, 8 ml
7800021	ENrich S, 1 ml
7800023	ENrich S, 8 ml

#### ENrich High-Resolution Size Exclusion Columns

7801070	ENrich 70, 24 ml
7801650	ENrich 650, 24 ml

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