

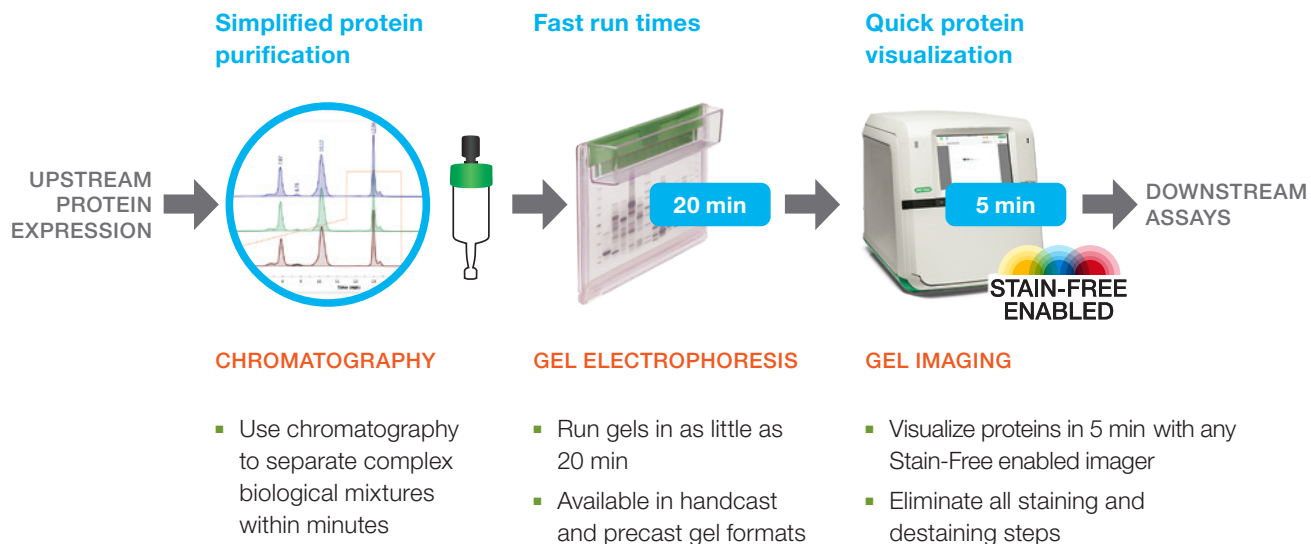
Proven Method for Confirming Protein Purity and Yield

Without the Need for Gel Staining Steps



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

Stain-Free gels provide visual confirmation of protein purity and yield by gel electrophoresis in less than 30 minutes. Stain-Free technology is perfect for drug discovery, drug development, and method development for preclinical research.

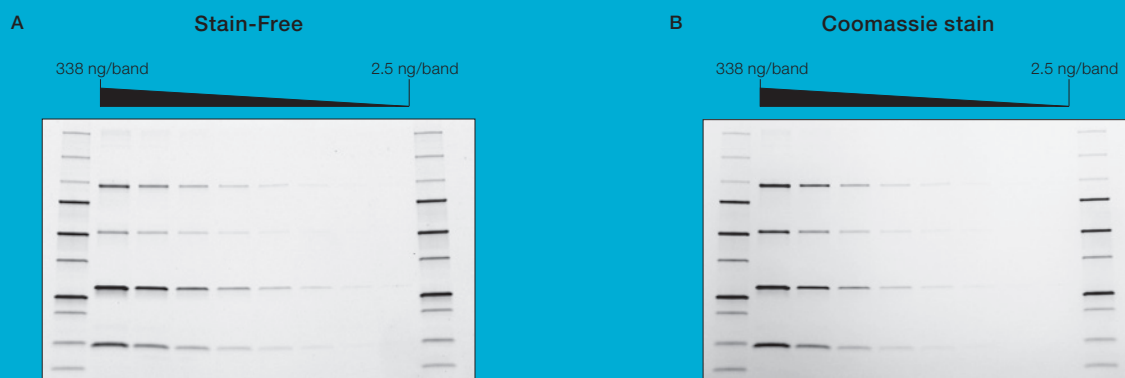


How does Stain-Free technology work?

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

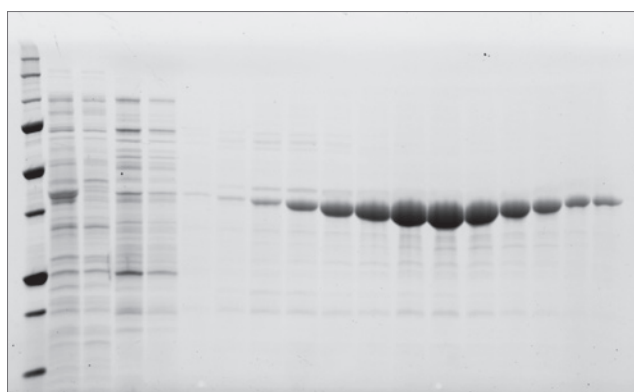
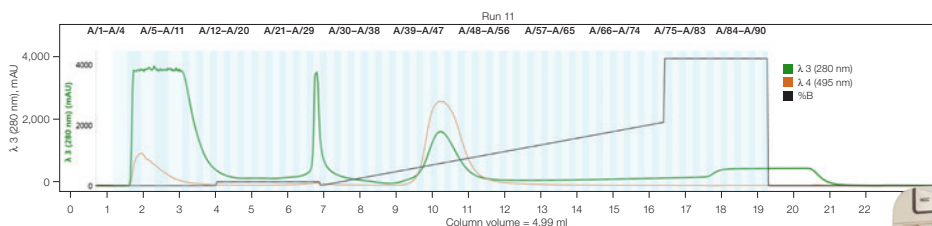


Stain-Free and Coomassie-stained gels demonstrate comparable sensitivity when visualizing proteins with varying tryptophan content. 4–20% Criterion TGX Stain-Free Gels were loaded with Precision Plus Protein Unstained Standards and a serial dilution of a protein mixture of four different proteins with 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). **A**, gels were run at 300 V for 20 min and immediately imaged with the Gel Doc EZ System; **B**, gels were then stained with Bio-Safe Coomassie Stain and imaged with the Gel Doc EZ System.

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



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

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 little 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

All formats are available in 10-packs.

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 singly.

** 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, mini cell buffer dam, companion running module, tank, lid with power cables
 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

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 (red, green, and blue [RGB], far red, near infrared); includes internal computer, 12" touch-screen display, Image Lab Touch Software, Blot/UV/Stain-Free Sample Tray
 1708265 **ChemiDoc XRS+ System with Image Lab Software**, PC or Mac, includes darkroom, UV transilluminator, epi-white illumination standard filter, camera, power supply, cables
 12009077 **GelDoc Go Gel Imaging System**, includes Image Lab Touch Software and UV/Stain-Free Imaging Tray; additional imaging trays available separately

Mini-PROTEAN and Criterion Empty Cassettes and Combs

4560001 **Mini-PROTEAN Empty Cassettes**, 1.0 mm thick, IPG well, pkg of 50
 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
 1653310 **Mini-PROTEAN Spacer Plates with 0.75 mm Integrated Spacers**, 5
 1653311 **Mini-PROTEAN Spacer Plates with 1.0 mm Integrated Spacers**, 5
 1653312 **Mini-PROTEAN Spacer Plates with 1.5 mm Integrated Spacers**, 5
 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 Prestained 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
 7880003 **NGC Quest 10 Plus System**
 7880004 **NGC Quest 100 Plus System**
 7880007 **NGC Scout 10 Plus System**
 7880008 **NGC Scout 100 Plus System**
 7880009 **NGC Discover 10 System**
 7880010 **NGC Discover 100 System**
 7880011 **NGC Discover 10 Pro System**
 7880012 **NGC Discover 100 Pro 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**
 7410002 **BioFrac Fraction Collector**
 17002070 **NGC Fraction Collector**
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

Visit bio-rad.com/Stain-Free and bio-rad.com/NGC for more information.

BIO-RAD and MINI-PROTEAN are trademarks of Bio-Rad Laboratories, Inc. in certain jurisdictions. All trademarks used herein are the property of their respective owner.

TGX Stain-Free Precast Gels are covered by U.S. Patent Numbers 7,569,130 and 8,007,646.

BIO-RAD

**Bio-Rad
Laboratories, Inc.**

Life Science
Group

Website bio-rad.com USA 1 800 424 6723 Australia 61 2 9914 2800 Austria 00 800 00 24 67 23 Belgium 00 800 00 24 67 23 Brazil 4003 0399
 Canada 1 905 364 3435 China 86 21 6169 8500 Czech Republic 00 800 00 24 67 23 Denmark 00 800 00 24 67 23 Finland 00 800 00 24 67 23
 France 00 800 00 24 67 23 Germany 00 800 00 24 67 23 Hong Kong 852 2789 3300 Hungary 00 800 00 24 67 23 India 91 124 4029300 Israel 0 3 9636050
 Italy 00 800 00 24 67 23 Japan 81 3 6361 7000 Korea 82 2 3473 4460 Luxembourg 00 800 00 24 67 23 Mexico 52 555 488 7670
 The Netherlands 00 800 00 24 67 23 New Zealand 64 9 415 2280 Norway 00 800 00 24 67 23 Poland 00 800 00 24 67 23 Portugal 00 800 00 24 67 23
 Russian Federation 00 800 00 24 67 23 Singapore 65 6415 3188 South Africa 00 800 00 24 67 23 Spain 00 800 00 24 67 23 Sweden 00 800 00 24 67 23
 Switzerland 00 800 00 24 67 23 Taiwan 886 2 2578 7189 Thailand 66 2 651 8311 United Arab Emirates 36 1 459 6150 United Kingdom 00 800 00 24 67 23

