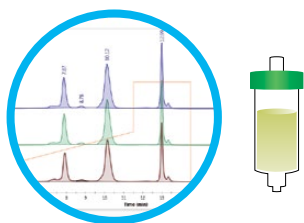


Protein Purification Workflow with
the NGC™ Chromatography System
and Stain-Free Gels

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 under 30 minutes.

Simplified protein purification



CHROMATOGRAPHY

- Use chromatography to separate complex biological mixtures within minutes

Fast run times



GEL ELECTROPHORESIS

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

Quick protein visualization



GEL IMAGING

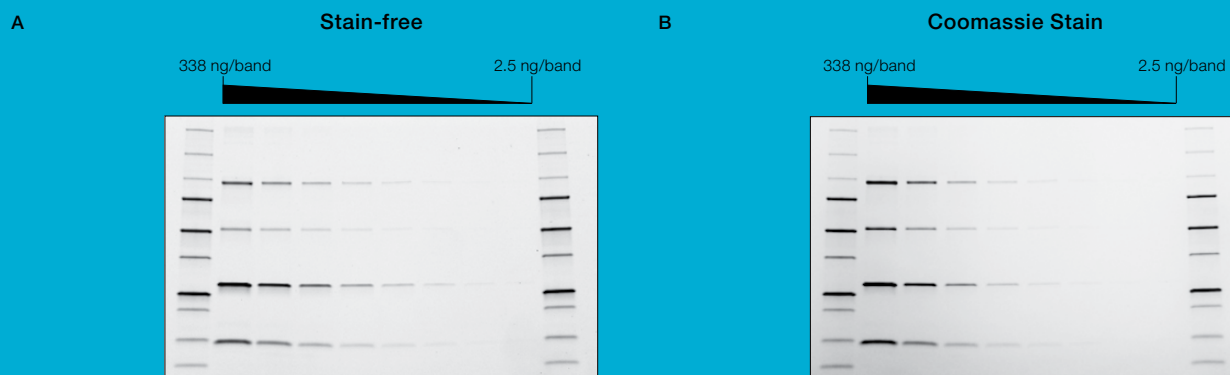
- Visualize proteins in 5 min with any stain-free enabled imager
- Eliminates all staining and destaining steps

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

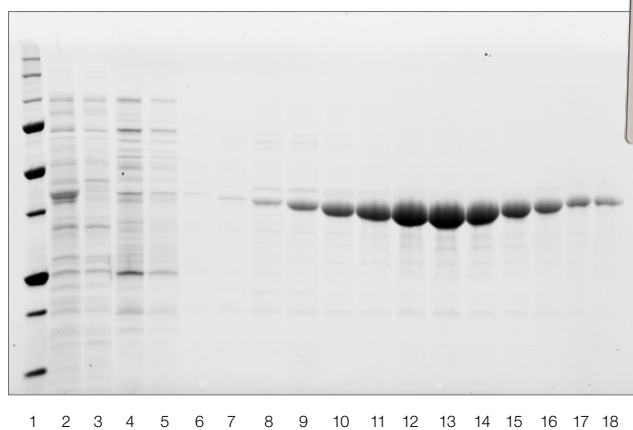
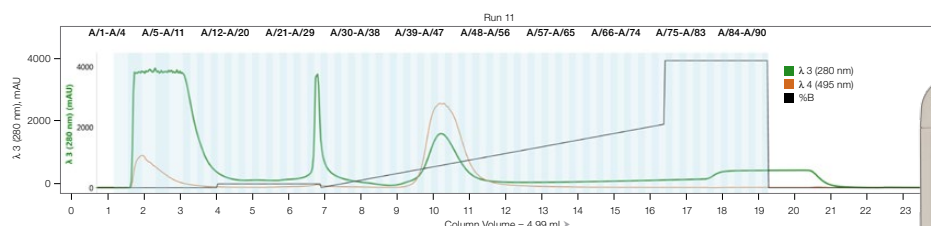


Stain-free and Coomassie-stained gels demonstrate comparable sensitivity when visualizing proteins with varying tryptophan content. 4–20% Criterion™ TGX Stain-Free™ Gels were loaded with Precision Plus Protein™ Unstained Standards and a serial dilution of a protein mixture of four different proteins 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 Imager (A). Gels were then stained with Bio-Safe™ Coomassie Stain and imaged on the Gel Doc EZ Imager (B).

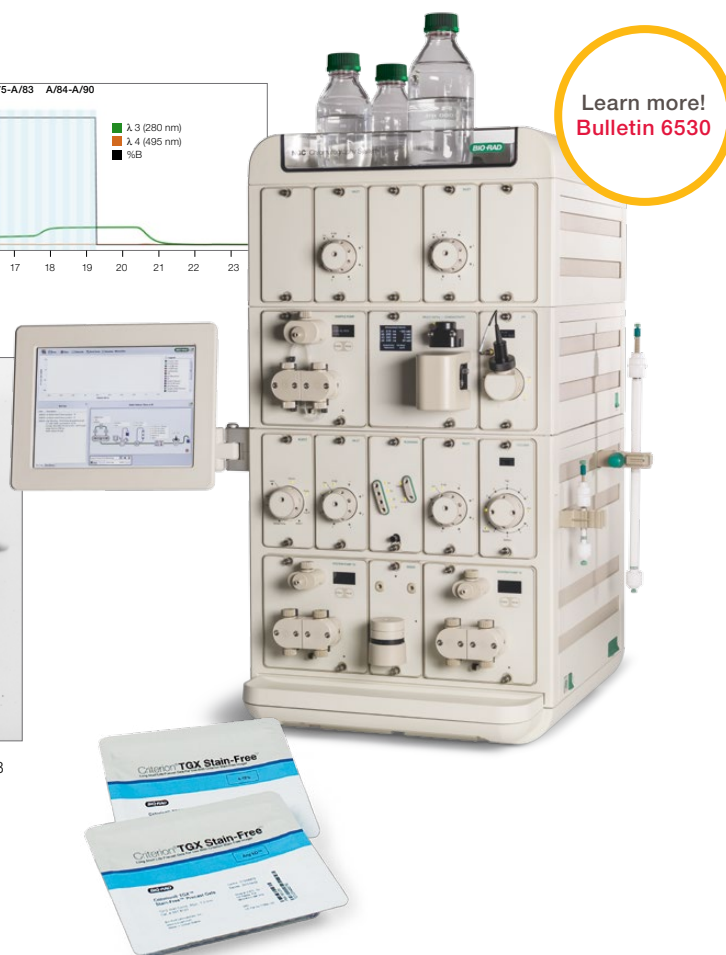
Confidently determine the next steps in your chromatography workflow

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.



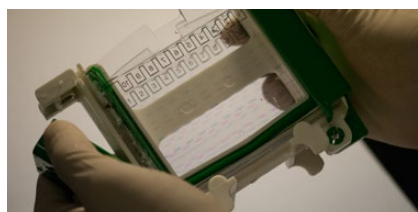
Stain-free gels are available in both handcast and precast gel formats

FastCast™ Handcast Gels



- Ready to run in as 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





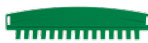

Precast gels



- 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 |  8+1-Well 30 µl |  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 | 456-8029 | 456-8023 | 456-8024 | 456-8025 | 456-8026 | 456-8021 |
| 10% Resolving Gel | 456-8039 | 456-8033 | 456-8034 | 456-8035 | 456-8036 | 456-8031 |
| 12% Resolving Gel | 456-8049 | 456-8043 | 456-8044 | 456-8045 | 456-8046 | 456-8041 |
| 4–15% Resolving Gel | 456-8089 | 456-8083 | 456-8084 | 456-8085 | 456-8086 | 456-8081 |
| 4–20% Resolving Gel | 456-8099 | 456-8093 | 456-8094 | 456-8095 | 456-8096 | 456-8091 |
| 8–16% Resolving Gel | 456-8109 | 456-8103 | 456-8104 | 456-8105 | 456-8106 | 456-8101 |
| Any kD Resolving Gel | 456-8129 | 456-8123 | 456-8124 | 456-8125 | 456-8126 | 456-8121 |

All formats are available in 10-packs (catalog numbers listed) or 2-packs (add an "S" to the end of the catalog number listed).

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 | 567-8023 | 567-8024 | 567-8025 | — | — |
| 10% Gel | 567-8033 | 567-8034 | 567-8035 | — | — |
| 12% Gel | 567-8043 | 567-8044 | 567-8045 | — | — |
| 18% Gel | 567-8073 | 567-8074 | 567-8075 | 567-8072 | 567-8071 |
| 4–15% Gel | 567-8083 | 567-8084 | 567-8085 | 567-8082 | 567-8081 |
| 4–20% Gel | 567-8093 | 567-8094 | 567-8095 | 567-8092 | 567-8091 |
| 8–16% Linear Gradient | 567-8103 | 567-8104 | 567-8105 | 567-8102 | 567-8101 |
| 10–20% Linear Gradient | 567-8113 | 567-8114 | 567-8115 | 567-8112 | 567-8111 |
| Any kD Gel | 567-8123 | 567-8124 | 567-8125 | 567-8122 | 567-8121 |

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

Catalog # Description

Gel Casting Solutions

| | |
|----------|---|
| 161-0180 | TGX Stain-Free™ FastCast™ Acrylamide Starter Kit, 7.5% |
| 161-0181 | TGX Stain-Free FastCast Acrylamide Kit, 7.5% |
| 161-0182 | TGX Stain-Free FastCast Acrylamide Starter Kit, 10% |
| 161-0183 | TGX Stain-Free FastCast Acrylamide Kit, 10% |
| 161-0184 | TGX Stain-Free FastCast Acrylamide Starter Kit, 12% |
| 161-0185 | TGX Stain-Free FastCast Acrylamide Kit, 12% |

Catalysts

| | |
|----------|--|
| 161-0700 | Ammonium Persulfate (APS), 10 g |
| 161-0800 | TEMED, 50 ml |

Buffers

| | |
|----------|--|
| 161-0772 | 10x Tris/Glycine/SDS, 5 L |
| 161-0737 | 2x Laemmli Sample Buffer, 30 ml |
| 161-0747 | 4x Laemmli Sample Buffer, 10 ml |

Electrophoresis Cells

| | |
|----------|---|
| 165-6001 | Criterion™ Cell , includes electrophoresis buffer tank, lid with power cables, 3 sample loading guides (12+1-well, 18-well, 26-well) |
| 165-8004 | 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 |
| 165-8000 | 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 |
| 165-8001 | 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 |
| 165-8006 | 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

| | |
|----------|--|
| 170-8270 | Gel Doc EZ Imaging System with Image Lab™ Software , PC or Mac, includes darkroom, camera, cables |
| 170-8195 | Gel Doc™ XR+ System with Image Lab Software , PC or Mac, includes darkroom, UV transilluminator, epi-white illumination standard filter, camera, cables |
| 170-8265 | ChemiDoc™ XRS+ System with Image Lab Software , PC or Mac, includes darkroom, UV transilluminator, epi-white illumination standard filter, camera, power supply, cables |
| 170-8370 | ChemiDoc™ Touch Imaging System , includes internal computer, 12" touch-screen display, camera, Image Lab Touch Software, chemi/UV/stain-free sample tray, Clarity™ Western ECL Substrate, Precision Plus Protein Dual Color Standards |
| 170-8280 | ChemiDoc™ MP System with Image Lab Software , PC or Mac, includes darkroom, UV transilluminator, epi-white illumination standard filter, camera, power supply, cables |

Catalog # Description

Mini-PROTEAN and Criterion Empty Cassettes and Combs

| | |
|----------|---|
| 456-0001 | Mini-PROTEAN Empty Cassettes , 1.0 mm thick, IPG well, pkg of 50 |
| 456-0003 | Mini-PROTEAN Empty Cassettes , 1.0 mm thick, 10-well, pkg of 50 |
| 456-0005 | Mini-PROTEAN Empty Cassettes , 1.0 mm thick, 12-well, pkg of 50 |
| 456-0006 | Mini-PROTEAN Empty Cassettes , 1.0 mm thick, 15-well, pkg of 50 |
| 456-0011 | Mini-PROTEAN Combs , IPG well, pkg of 50, for use with 456-0001 |
| 456-0013 | Mini-PROTEAN Combs , 10-well, pkg of 50, for use with 456-0003 |
| 456-0015 | Mini-PROTEAN Combs , 12-well, pkg of 50, for use with 456-0005 |
| 456-0016 | Mini-PROTEAN Combs , 15-well, pkg of 50, for use with 456-0006 |
| 345-9901 | Criterion Empty Cassettes , 1 mm, 12+2-well, pkg of 10 |
| 345-9902 | Criterion Empty Cassettes , 1 mm, 18-well, pkg of 10 |
| 345-9903 | Criterion Empty Cassettes , 1 mm, 26-well, pkg of 10 |
| 345-9904 | Criterion Empty Cassettes , 1 mm, prep+2-well, pkg of 10 |
| 345-9906 | Criterion Empty Cassettes , 1 mm, IPG+1-well, pkg of 10 |

Protein Standards

| | |
|----------|---|
| 161-0393 | Precision Plus Protein All Blue Standards Value Pack , 5 x 500 µl, 250 applications |
| 161-0396 | Precision Plus Protein Unstained Standards Value Pack , 5 x 1,000 µl, 500 applications |

NGC Medium Pressure Chromatography Systems and Modules

| | |
|----------|---|
| 788-0001 | NGC Quest™ 10 System |
| 788-0003 | NGC™ Quest 10 Plus System |
| 788-0002 | NGC Quest 100 System |
| 788-0004 | NGC Quest 100 Plus System |
| 788-0005 | NGC Scout™ 10 System |
| 788-0007 | NGC™ Scout 10 Plus System |
| 788-0009 | NGC Discover™ 10 System |
| 788-4010 | NGC Buffer Blending Valve Module |
| 788-4006 | NGC Inlet Valve Module |
| 788-4011 | NGC pH Valve Module |
| 788-4012 | NGC Column Switching Valve Module (10 ml) |
| 788-4026 | NGC Column Switching Valve Module (100 ml) |
| 788-4013 | NGC Outlet Valve Module |

ENrich™ High-Resolution Ion Exchange Columns

| | |
|----------|------------------------|
| 780-0001 | ENrich Q , 1 ml |
| 780-0003 | ENrich Q , 8 ml |
| 780-0021 | ENrich S , 1 ml |
| 780-0023 | ENrich S , 8 ml |

ENrich High-Resolution Size Exclusion Columns

| | |
|----------|---------------------------|
| 780-1070 | ENrich 70 , 24 ml |
| 780-1650 | ENrich 650 , 24 ml |

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