

# Life Science Reagents for Protein Electrophoresis from Sigma-Aldrich®

Nucleic Acid  
Blotting  
DNA & RNA  
(Southern) (Northern)

Nucleic Acid  
Preparation  
DNA & RNA

Nuclear Magnetic  
Resonance (NMR)

Cloning

Recombinant  
Protein Expression  
& Purification

Protein  
Detection  
Western Blots  
& ELISAs

Proteomics

Nucleic Acid  
Electrophoresis  
DNA & RNA

Transfection

Cell  
Culture

Nucleic Acid  
Amplification  
PCR, QPCR, RT-PCR

Stem Cell  
Culture

Cell  
Signaling

Cell-Based  
Assays

**Protein  
Electrophoresis**  
PAGE & 2D PAGE

Genotyping

## *We Ripple Through Everything You Do!*

- Extensive reagent offering to support your protein electrophoresis based research needs
- Full selection of unstained, Colorburst™, and specialty markers
- Quality and availability assured
- Market leading Technical Service
- Leading Web support tools:

**Proteomics** — [sigma-aldrich.com/pep](http://sigma-aldrich.com/pep)

**Protein Markers** — [sigma-aldrich.com/proteinmarkers](http://sigma-aldrich.com/proteinmarkers)

**Virtual Stockroom** — [sigma-aldrich.com/virtualstockroom](http://sigma-aldrich.com/virtualstockroom)

# Life Science Reagents for Protein Electrophoresis from Sigma-Aldrich®

## Sigma offers a full line of molecular weight markers for Protein Electrophoresis!

### • Unstained Markers

- SigmaMarkers™ wide, high and low range
- Ultra-low range marker for use with Tricine SDS-PAGE
- Peptide molecular weight marker (2,500—17,000Da)

### • Prestained Markers

#### ColorBurst™ Markers

- 8 proteins ranging from 8 to 220kDa, chemically reduced, alkylated and conjugated to brilliantly colored dyes
- Ready-to-use. No boiling or chemical reduction needed
- Impressive performance in a variety of gel compositions

#### Color Markers

- Monitor protein migration and transfer efficiency
- Low range for Laemmli SDS-PAGE system
- Ultra-low range for Tricine SDS-PAGE system

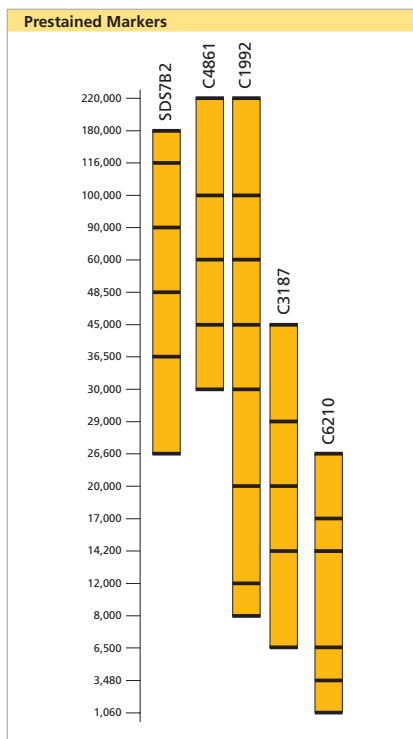
To view our full line of molecular weight markers, please visit us at [sigma-aldrich.com/proteinmarkers](http://sigma-aldrich.com/proteinmarkers).

Cat. No.	Description
<b>Acids &amp; Bases</b>	
<b>320099</b>	Acetic acid ACS reagent, ≥99.7%
<b>251364</b>	Formic acid ACS reagent, ≥96.0%
<b>H1758</b>	Hydrochloric acid Molecular Biology Grade, 36.5-38.0 %
<b>S8045</b>	Sodium hydroxide SigmaUltra, ≥98%, pellets (anhydrous)
<b>T8657</b>	Trichloroacetic acid for electrophoresis, suitable for fixing solution (for IEF and PAGE gels), ≥99%
<b>Acrylamides</b>	
<b>A3553</b>	Acrylamide for electrophoresis, ≥99%, powder
<b>M7279</b>	N,N'-Methylenebisacrylamide for electrophoresis, ≥98%, powder
<b>A3574</b>	Acrylamide/Bis-acrylamide. 30% solution 29:1
<b>A3699</b>	Acrylamide/Bis-acrylamide. 30% solution 37.5:1
<b>A2917</b>	Acrylamide/Bis-acrylamide 19:1 (ratio)
<b>A9926</b>	Acrylamide/Bis-acrylamide 40% solution 19:1 (ratio)
<b>Agarose</b>	
<b>A9539</b>	Agarose for molecular biology
<b>A5093</b>	Agarose Low EEO, for molecular biology
<b>A6013</b>	Agarose Type I, Low EEO
<b>A4679</b>	Agarose For Immunoelectrophoresis
<b>A9311</b>	Agarose Medium EEO, for electrophoresis
<b>A5304</b>	Agarose for electrophoresis
<b>Antibiotics</b>	
<b>A8351</b>	Ampicillin sodium salt Biotechnology Performance Certified
<b>N4014</b>	Nystatin powder, γ-irradiated, cell culture tested
<b>S9137</b>	Streptomycin sulfate salt cell culture tested, ≥98%
<b>Buffers</b>	
<b>A6141</b>	Ammonium bicarbonate ReagentPlus®, ≥99.0%
<b>B4429</b>	BIS-TRIS Biotechnology Performance Certified, cell culture tested, insect cell culture tested, ≥98%
<b>I5513</b>	Imidazole for molecular biology, ≥99%
<b>M3183</b>	MOPS Biotechnology Performance Certified, cell culture tested, ≥99.5%
<b>M9024</b>	MOPS sodium salt Biotechnology Performance Certified, cell culture tested, ≥99.5%
<b>P3813</b>	Phosphate buffered saline powder, pH 7.4
<b>P5833</b>	Potassium carbonate SigmaUltra, ≥99.0%
<b>P9791</b>	Potassium phosphate monobasic for molecular biology, ≥98%
<b>S3401</b>	Sample Buffer, Laemmli 2× Concentrate
<b>S2889</b>	Sodium acetate anhydrous for molecular biology
<b>C8532</b>	Sodium citrate tribasic dihydrate Molecular Biology, ~99% capillary GC

Cat. No.	Description
<b>T7777</b>	Tris-Glycine-SDS Buffer 10× Concentrate
<b>T1258</b>	Trizma® acetate reagent grade
<b>T6066</b>	Trizma base Biotechnology Performance Certified, meets EP, USP testing specifications, cell culture tested, ≥99.9%
<b>T5941</b>	Trizma hydrochloride for molecular biology, Biotechnology Performance Certified, cell culture tested, ≥99.0%
<b>T4904</b>	Tris-Glycine Buffer 10× Concentrate
<b>Detergents</b>	
<b>C9426</b>	CHAPS for electrophoresis, ≥98%
<b>L3771</b>	Sodium dodecyl sulfate for electrophoresis, ≥98.5%
<b>T8787</b>	Triton® X-100 for molecular biology
<b>P5927</b>	TWEEN® 20 for electrophoresis, suitable for solubilizing agent of membrane proteins and as a blocking reagent in immunoblotting
<b>General Reagents</b>	
<b>M7154</b>	2-Mercaptoethanol for electrophoresis
<b>A7906</b>	Albumin from bovine serum pH ~7 (1% in 0.15 M NaCl), ≥98% (agarose gel electrophoresis), lyophilized powder
<b>A5378</b>	Albumin from chicken egg white Grade III, ≥90% (agarose gel electrophoresis), lyophilized powder
<b>B2518</b>	Albumin, Acetylated from bovine serum lyophilized powder, for molecular biology
<b>320145</b>	Ammonium hydroxide solution ACS reagent, 28.0-30.0% as NH <sub>3</sub>
<b>A3678</b>	Ammonium persulfate for electrophoresis, ≥98%
<b>C3306</b>	Calcium chloride dihydrate for molecular biology, ~99%
<b>D9779</b>	DL-Dithiothreitol for molecular biology, ≥98% (TLC), ≥99% (titration)
<b>E5134</b>	EDTA disodium salt dihydrate for molecular biology, ≥99%
<b>F8775</b>	Formaldehyde solution for molecular biology, 36.5-38% in H <sub>2</sub> O
<b>G4004</b>	Glutaraldehyde solution 25 wt. % in H <sub>2</sub> O
<b>G8773</b>	Glycerol for electrophoresis, ≥99%
<b>G8898</b>	Glycine for electrophoresis, ≥99%
<b>G3272</b>	Guanidine hydrochloride for molecular biology, ≥99%
<b>216763</b>	Hydrogen peroxide solution ACS reagent, 30 wt. % in H <sub>2</sub> O
<b>I1149</b>	Iodoacetamide SigmaUltra
<b>M1028</b>	Magnesium chloride solution for molecular biology, 1.00 M±0.01 M
<b>78830</b>	Phenylmethanesulfonyl fluoride BioChemika, ≥99.0%
<b>223468</b>	Potassium permanganate ACS reagent, ≥99.0%
<b>217263</b>	Sodium thiosulfate ReagentPlus, 99%
<b>T9281</b>	TEMED for electrophoresis, ~99%
<b>T4625</b>	Thiamine hydrochloride reagent grade, ≥99%

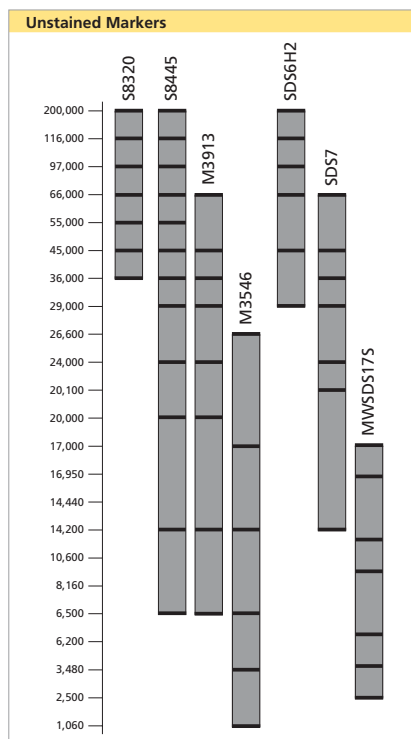
Cat. No.	Description
<b>T8656</b>	Thiourea ACS reagent, ≥99.0%
<b>T3924</b>	Trypsin-EDTA solution 1 ×, 0.5 g porcine trypsin and 0.2 g EDTA • 4Na per liter of Hanks Balanced Salt Solution with phenol red., sterile-filtered, cell culture tested
<b>U6504</b>	Urea for electrophoresis
<b>W4502</b>	Water Molecular Biology Reagent
<b>Z0173</b>	Zinc chloride for molecular biology, ≥97.0%
<b>Z0251</b>	Zinc sulfate heptahydrate cell culture tested
<b>S3401</b>	Sample Buffer Laemmli 2× Concentrate for SDS-PAGE
<b>Solvents</b>	
<b>B7906</b>	1-Butanol for molecular biology, ≥99%
<b>B85919</b>	2-Butanol ReagentPlus, ≥99%
<b>I9516</b>	2-Propanol for molecular biology, ≥99%
<b>179124</b>	Acetone ACS reagent, ≥99.5%
<b>360457</b>	Acetonitrile ACS reagent, ≥99.5%
<b>496189</b>	Chloroform biotech. grade, ≥99.8%, contains 0.5-1.0% ethanol as stabilizer
<b>E7023</b>	Ethanol 200 proof (absolute), for molecular biology
<b>494437</b>	Methanol biotech. grade, 99.93%
<b>Stains &amp; Dyes</b>	
<b>A8181</b>	Amido Black Staining Solution 2× electrophoresis reagent
<b>B2025</b>	Brilliant Blue G - Colloidal Concentrate
<b>B0770</b>	Brilliant Blue G Dye content ~90 % by elemental analysis
<b>B8647</b>	Brilliant Blue R Concentrate suitable for SDS-PAGE, methanol solution
<b>B5525</b>	Bromophenol Blue sodium salt for electrophoresis
<b>G1041</b>	EZBlue™ Gel Staining Reagent
<b>P7170</b>	Ponceau S solution 0.1 % (w/v) in 5% acetic acid (w/v)
<b>S8157</b>	Silver nitrate SigmaUltra, >99%
<b>S5692</b>	SYPRO® Orange Protein Gel Stain
<b>89640</b>	Toluidine Blue Standard Fluka, for microscopy
<b>Markers</b>	
<b>C1992</b>	ColorBurst™ Electrophoresis Marker (M.W. 8,000-220,000), also for Western Blot
<b>SDS7B2</b>	Prestained Molecular Weight Marker (M.W. 27,000-180,000)
<b>M3913</b>	SigmaMarker™ Low Range, mol wt (6,500-66,000)
<b>S8445</b>	SigmaMarker Wide Range, mol wt (6,500-200,000)
<b>MWND500</b>	Native Marker
<b>SDS6H2</b>	Molecular Weight Marker (M.W. 30,000-200,000)
<b>M3411</b>	Marker for 2D Electrophoresis

# Migrate to Sigma® Molecular Weight Standards for Accurate Electrophoresis Measurement



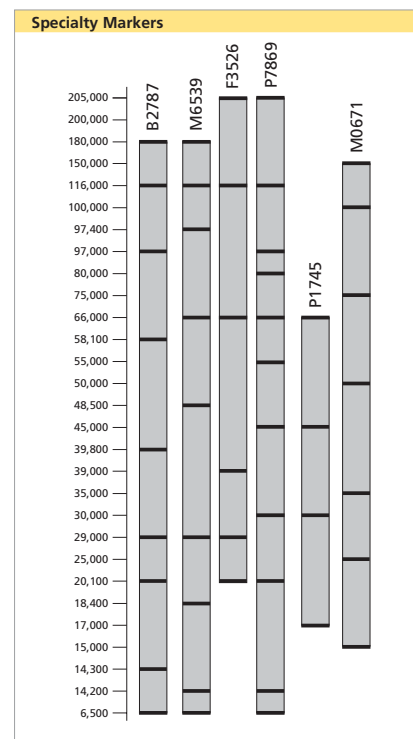
## Prestained Markers

Sigma's prestained markers contain specific dye-conjugated proteins. Both single and multiple color markers are available and provide visible indication of protein migration during electrophoresis and transfer during Western blotting. ColorBurst™ high range and wide range markers provide a rainbow of brilliantly colored bands in a ready-to-use format, while Sigma color markers incorporate low molecular weight proteins ranging from 1,060 Da to 26,600 Da. Sigma's long standing prestained blue marker provides 7 sharp blue bands for excellent reference.



## Unstained Markers

Sigma's unstained markers yield well-defined bands amenable to most protein electrophoresis staining methods. The low molecular weight ranges of M3546 and MWSDS17S are best used in Tris-Tricine SDS-PAGE applications. All other unstained markers are suited for use in Laemmli SDS-PAGE applications.



## Specialty Markers

Sigma's specialty markers are a set of molecular weight markers each with specific attributes making it unique. Special attention should be paid when selecting one of the Specialty Markers to ensure it will meet the requirements of the intended application.

### World Headquarters

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**Development/Bulk Manufacturing Inquiries** **SAFC**™ (800) 244-1173

*Accelerating Customers'  
Success through Leadership  
in Life Science, High  
Technology and Service*

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