

Prestained Protein Marker, Broad Range (Premixed Format)

- Small 1050 µl
 Large 5 x 1050 µl

- Orders** ■ 877-616-CELL (2355)
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Support ■ 877-678-TECH (8324)
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rev. 02/25/16

For Research Use Only. Not For Use In Diagnostic Procedures.

Description: Prestained Protein Marker, Broad Range is a mixture of purified proteins covalently coupled to a blue dye that resolves to 8 bands between 7 and 175 kDa when electrophoresed (1). The protein concentrations are carefully balanced for even intensity. The covalent coupling of the dye to the proteins affects their electrophoretic behavior in SDS-PAGE gels relative to unstained proteins. The apparent molecular weight of the prestained proteins are given in the table below.

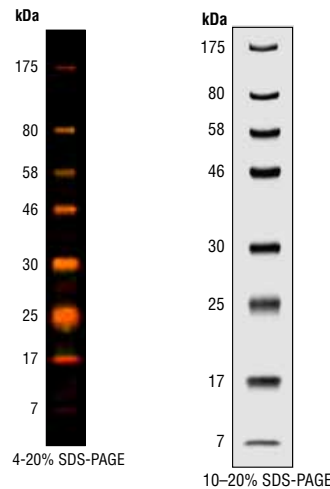
Directions for Use:

1. Transfer the desired amount of the Prestained Protein Marker to a separate tube. For visualizing during electrophoresis: use 15 µl for mini-gels and 30 µl for full length gels.
2. Heat the Marker to 95-100°C for 3-5 minutes.
3. After a quick microcentrifuge spin, load directly onto a gel. To ensure uniform mobility, load an equal volume of 1X reducing SDS Loading Buffer into any unused wells.

Note on Apparent Molecular Weights:

The relative sizes of these protein markers may depend on the type of gel used and may appear different than expected. The coupling of a charged dye molecule to a protein marker alters the overall charge of the protein and will likely alter its mobility in an SDS polyacrylamide gel. The extent of this effect can vary with the properties of the gel type (e.g., Tris-glycine, Tris-Tricine, etc) used in the analysis. For this reason, the sizes of these marker proteins are expressed here as apparent molecular weights. For best results, we recommend using these prestained protein markers on a Tris-glycine SDS gel.

Concentration: Contents 0.05–0.1 mg/ml of each protein.



Storage: Supplied in 70 mM Tris-HCl (pH 6.8 at 25°C), 33 mM NaCl, 1 mM Na₂EDTA, 2% (w/v) SDS, 40 mM DTT, 0.01% (w/v) bromophenol blue and 10% glycerol. Store at -20°C.

Companion Products:

Biotinylated Protein Ladder Detection Pack #7727

Prestained Protein Marker, Broad Range

Protein	Source	Apparent MW (Da)
MBP-β-galactosidase	<i>E. coli</i>	175,000
MBP-paramyosin	<i>E. coli</i>	80,000
MBP-CBD	<i>E. coli</i>	58,000
CBD-Mxe Intein-2CBD	<i>E. coli</i>	46,000
CBD-Mxe Intein	<i>E. coli</i>	30,000
CBD-BmFKBP13	<i>E. coli</i>	25,000
Lysozyme	chicken egg white	17,000
Aprotinin	bovine lung	7,000

MBP = maltose-binding protein.

CBD = chitin binding domain.



SAFETY DATA SHEET (SDS): According to the OSHA Hazard Communication Standard 29 CFR 1910.1200
 Issuing Date: 2014-01-31 Revision Date: 2014-02-03 Version: 1

SECTION 1. Identification

Product identifier

Product No. 7720
Product name Prestained Protein Marker, Broad Range (Premixed Format)
Description Mixture of purified proteins covalently coupled to a blue dye that resolves to 8 bands between 7 and 175 kDa when electrophoresed.
Other means of identification 7720A, 7720L, 7720MC, 7720P, 7720S.

Recommended use of the chemical and restrictions on use

Identified uses This product is intended for research purposes only.
Uses advised against This product is not intended for use in diagnostic procedures or therapeutics. This product is not intended for use in humans or animals.

Manufacturer, importer, supplier

Manufacturer address Cell Signaling Technology, Inc.
 3 Trask Lane
 Danvers, MA 01923
 TEL: +1 978 867 2300
 FAX: +1 978 867 2400

Website www.cellsignal.com
Email address support@cellsignal.com
Company phone number 978-867-2300
Emergency telephone number In case of emergency call CHEMTREC 1-800-424-9300

SECTION 2. Hazard(s) identification

Classification

Serious eye damage/eye irritation Category 2B

GHS Label elements, including precautionary statements

Signal Word Warning

Hazard statement(s) Causes eye irritation

Precautionary Statement(s) Wash face, hands and any exposed skin thoroughly after handling. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing if eye irritation persists. Get medical advice/attention

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Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Ensure adequate ventilation.
Other information No information available.

Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.
Methods for cleaning up Cover liquid spill with sand, earth or other noncombustible absorbent material. Cover powder spill with plastic sheet or tarp to minimize spreading. Pick up and transfer to properly labeled containers.

SECTION 7. Handling and storage

Precautions for safe handling

Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Prevent the formation of vapors, mists and aerosols. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children.
Packaging material No information available.
Incompatible products Strong oxidizing agents. Strong bases.

SECTION 8. Exposure controls/personal protection

Control parameters

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH REL
glycerol 56-81-5	TWA: 10 mg/m ³	TWA: 15 mg/m ³ (total) TWA: 5 mg/m ³ (resp) (vacated) TWA: 10 mg/m ³ (total) (vacated) TWA: 5 mg/m ³ (resp)	-

(total) = Total dust
 (resp) = Respirable fraction
 (vacated) = Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Showers, eyewash stations, and ventilation systems.

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Supplementary Hazard Information

Hazards not otherwise classified (HNOC) None
Unknown Acute Toxicity 1.11% of the mixture consists of ingredient(s) of unknown toxicity.

SECTION 3. Composition/information on ingredients

Chemical nature Aqueous dye solution of organic and inorganic compounds.
Common name No information available.
Synonyms No information available.

Chemical Name	CAS No.	Weight %
(R*,R*)-1,4-dimercaptobutane-2,3-diol	3483-12-3	0.5-1.5
sodium dodecyl sulphate	151-21-3	1-5
glycerol	56-81-5	10-30

SECTION 4. First-aid measures

Eye contact Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing.
Skin contact Consult a physician if necessary. Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.
Inhalation Move to fresh air. Consult a physician, if not breathing, give artificial respiration.
Ingestion Rinse mouth. Drink plenty of water. If symptoms persist, call a physician. Do NOT induce vomiting. If swallowed, do not induce vomiting - seek medical advice. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

No information or data specific to the product on this toxicological (health) effect is available.

Indication of any immediate medical attention and special treatment needed

Notes to physician Treat symptomatically.

Advice for emergency responders

General advice If symptoms persist, call a physician. Show this safety data sheet to the doctor in attendance. Do not breathe dust/fume/gas/mist/vapors/spray.
Protection of First-aiders Use personal protective equipment.

SECTION 5. Fire-fighting measures

Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable Extinguishing Media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

No information available.

Explosion Data

Sensitivity to Mechanical Impact None.

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Individual protection measures, such as personal protective equipment

Eye/face protection Tightly fitting safety goggles.
Skin and body protection Wear protective gloves/covering.
Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
Hygiene measures Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state Liquid
Appearance No information available
Odor No information available
Color Blue
Odor Threshold No information available
pH No information available
Melting point/freezing point No information available
Initial boiling point and boiling range No information available
Flash point No information available
Evaporation rate No information available
Flammability (solid, gas) No information available
Upper flammability limit No information available
Lower flammability limit No information available
Vapor pressure No information available
Vapor density No information available
Relative density No information available
Solubility No information available
Solubility in other solvents No information available
Partition coefficient: n-octanol/water No information available
Autoignition temperature No information available
Decomposition temperature No information available
Explosive properties No information available
Oxidizing properties No information available
VOC content No information available
Viscosity No information available
Density No information available

SECTION 10. Stability and reactivity

Reactivity

No information available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Hazardous reactions None under normal processing.
Hazardous polymerization None under normal processing.

Conditions to Avoid

No information available.

Incompatible Materials

Strong oxidizing agents. Strong bases.

Hazardous Decomposition Products

None known based on information supplied.

SECTION 11. Toxicological information**Information on likely routes of exposure**

Inhalation	There is no data available for this product.
Eye contact	May cause temporary eye irritation. Expected to be an irritant based on components.
Skin contact	There is no data available for this product.
Ingestion	There is no data available for this product.

Information on toxicological effects

This material should only be handled by, or under the close supervision of, those properly qualified in the handling and use of potentially hazardous chemicals. It should be borne in mind that the toxicological and physiological properties of this compound is not well defined.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
(R,R')-1,4-dimercaptobutane-2,3-di-ol 3483-12-3	= 400 mg/kg (Rat)	-	-
sodium dodecyl sulphate 151-21-3	= 1288 mg/kg (Rat)	= 580 mg/kg (Rabbit)	> 3900 mg/m ³ (Rat) 1 h
glycerol 56-81-5	= 12600 mg/kg (Rat)	> 10000 mg/kg (Rabbit)	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Symptoms	Liquid, aerosols and vapors of this product are irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation and/or a feeling like that of fine dust in the eyes.
Corrosivity	No information available.
Sensitization	No information available.
Mutagenic effects	No information available.
Carcinogenicity	No component of this product present at levels greater than or equal to 0.1% is identifiable as probable, possible or confirmed carcinogen by IARC, ACGIH, NTP, or OSHA.
Reproductive toxicity	No information available.
Developmental Toxicity	No information available.
Teratogenicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Target Organ Effects	Eyes, Respiratory system, Kidney, Skin.
Neurological effects	No information available.
Aspiration Hazard	No information available.
Endocrine Disruptor Information	No information available.
Unknown Acute Toxicity	1.11% of the mixture consists of ingredient(s) of unknown toxicity.

The following values are calculated based on chapter 3.1 of the GHS document

SECTION 12. Ecological information**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
(R,R')-1,4-dimercaptobutane-2,3-di-ol 3483-12-3	Not Listed	Not Listed	Not Listed
sodium dodecyl sulphate 151-21-3	Not Listed	Not Listed	Not Listed
glycerol 56-81-5	Listed	Listed	Listed

U.S. EPA Label Information

This product does not contain any substances regulated as pesticides.

SECTION 16. Other information

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Revision Date: 2014-02-03

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Ecotoxicity

11.73% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
(R,R')-1,4-dimercaptobutane-2,3-di-ol 3483-12-3	-	-	LC50: 27mg/L (Daphnia magna) 48 h
sodium dodecyl sulphate 151-21-3	EC50: 3.59 - 15.6 mg/L (Pseudokirchneriella subcapitata) 96 h	LC50: 1.31 mg/L (Cyprinus carpio) 96 h LC50: 4.62 mg/L (Oncorhynchus mykiss) 96 h	EC50: 1.8 mg/L (Daphnia magna) 48 h
glycerol 56-81-5	-	LC50: 51 - 57 mL/L (Oncorhynchus mykiss) 96 h	EC50: 500 mg/L (Daphnia magna) 24 h

Persistence and degradability	No information available.
Bioaccumulation	No information available.
Mobility	No information available.

Chemical Name	Octanol-Water Partition Coefficient
sodium dodecyl sulphate 151-21-3	1.6
glycerol 56-81-5	-1.76

Other adverse effects

No information available.

SECTION 13. Disposal considerations**Waste Disposal Methods**

Dispose of in accordance with all applicable national environmental laws and regulations.

Disposal considerations

Do not empty into drains; dispose of this material and its container in a safe way.

SECTION 14. Transport information

This material is not subject to regulation as a hazardous material for shipping.

SECTION 15. Regulatory information

All of the components in the product are on the following inventory lists:

TSCA	Complies
DSL	Complies
NDSL	Complies

End of Safety Data Sheet