Safety Data Sheet (SDS) According to the REACH Regulation (EC) No. 1907/2006

Issuing Date: 2014-06-20 **Revision Date:** 2017-09-11 **Version:** 2

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product No 13953
Product name Prestained Protein Marker, Broad Range (11-190 kDa)
Reach registration number This substance/mixture contains only ingredients which have been registered, or are exempt from registration, according to Regulation (EC) No. 1907/2006.

Contains

Chemical Name	Index No.	CAS No
urea (13-30)	Not Listed	57-13-6
glycerol (10-30)	Not Listed	56-81-5
sodium dodecyl sulphate (1-5)	Not Listed	151-21-3

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses For research use only

1.3. Details of the supplier of the safety data sheet

Importer (Applicable in EU only)
Cell Signaling Technology Europe B.V.
Schuttersveld 2
2316 ZA Leiden
The Netherlands
TEL: +31 (0)71 7200 200
FAX: +31 (0)71 891 0098

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

Website www.cellsignal.com
E-mail Address info@cellsignal.eu

1.4. Emergency telephone number

CHEMTREC 24 hours a day, 7 days a week, 365 days a year
+1 703 527 3887 (INTERNATIONAL) +1 800 424 9300 (NORTH AMERICA)

Europe 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Serious eye damage/eye irritation	Category 2 - (H319)

2.2. Label elements

Signal word
Warning

Hazard statement(s)
H319 - Causes serious eye irritation

Precautionary statement(s)
P264 - Wash face, hands and any exposed skin thoroughly after handling
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313 - If eye irritation persists: Get medical advice/attention

2.3. Other hazards

None under normal use conditions.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical Name	CAS No	Weight %	EC No	Classification (1272/2008)	REACH Registration Number
urea	57-13-6	13-30	200-315-5	Eye Irrit. 2 (H319)	no data available
glycerol	56-81-5	10-30	200-289-5	-	no data available
sodium dodecyl sulphate	151-21-3	1-5	205-788-1	STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Acute Tox. 4 (H302) Acute Tox. 3 (H311)	no data available

For the full text of the R-phrases mentioned in this Section, see Section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice Immediate medical attention is not required. Show this safety data sheet to the doctor in attendance. If symptoms persist, call a physician.

Inhalation Move to fresh air. If symptoms persist, call a physician. Immediate medical attention is not required. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

Skin contact Wash off immediately with plenty of water for at least 15 minutes. If symptoms persist, call a physician. Immediate medical attention is not required. Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

Eye contact Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing.

Ingestion Immediate medical attention is not required. Rinse mouth. Drink plenty of water. Do NOT

induce vomiting. Clean mouth with water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician. If swallowed, do not induce vomiting - seek medical advice.

Protection of first-aiders Use personal protective equipment.

4.2. Most important symptoms and effects, both acute and delayed

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.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to physician Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media No information available.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Use personal protective equipment. Avoid contact with the skin and the eyes. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

6.3. 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 Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. After cleaning, flush away traces with water. Prevent product from entering drains. Dam up.

6.4. Reference to other sections

See Sections 8 & 13 for additional information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Wear personal protective equipment. Use only in area provided with appropriate exhaust ventilation. Prevent the formation of vapors, mists and aerosols. When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

7.3. Specific end use(s)

Use as a laboratory reagent.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit values					
Chemical Name	**European Union**	**United Kingdom**	**France**	**Spain**	**Germany**
glycerol		STEL 30 mg/m³ TWA 10 mg/m³	TWA 10 mg/m³	TWA 10 mg/m³	Ceiling / Peak: 400 mg/m³ TWA: 200 mg/m³
Chemical Name	**Italy**	**Portugal**	**Netherlands**	**Finland**	**Denmark**
glycerol		TWA 10 mg/m³		TWA 20 mg/m³	
Chemical Name	**Austria**	**Switzerland**	**Poland**	**Norway**	**Ireland**
urea				TWA 30 µg Hg/g Creatinine STEL 45 µg Hg/g Creatinine	
glycerol		SS-C** TWA 50 mg/m³ STEL 100 mg/m³	TWA 10 mg/m³		TWA 10 mg/m³ STEL 30 mg/m³

8.2. Exposure controls

Appropriate engineering controls
Showers, eyewash stations, and ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection	Tightly fitting safety goggles. Face-shield.
Skin protection	
Hand protection	Impervious gloves.
Other	Long sleeved clothing. Apron. Impervious gloves.
Respiratory protection	In case of inadequate ventilation wear respiratory protection.

Environmental Exposure Controls
Do not allow material to contaminate ground water system.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Aqueous solution
Color	Blue
Odor	Mild, Rotten-egg like
Odor Threshold	No information available

Property	**Values**	**Remarks • Method**
pH	7.5	@ 25 °C
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
Partition coefficient: n-octanol/water	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available.
Viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available

9.2. Other information

Softening point	No information available
Molecular Weight	No information available
Solubility in other solvents	No information available
VOC content	No information available
Density	No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization	Hazardous polymerization does not occur.
Hazardous reactions	None under normal processing.

10.4. Conditions to avoid

None known based on information supplied.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

None under normal use conditions.

SECTION 11: Toxicological information

11.1. 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
urea	= 8471 mg/kg (Rat)	-	-
glycerol	= 12600 mg/kg (Rat)	> 10 g/kg (Rabbit)	> 570 mg/m³ (Rat) 1 h
sodium dodecyl sulphate	= 1288 mg/kg (Rat)	= 580 mg/kg (Rabbit)	> 3900 mg/m³ (Rat) 1 h
(R*,R*)-1,4-dimercaptobutane-2,3-di	400 mg/kg (Rat)	-	-

ol			

ATEmix (oral) 15,119 mg/kg
ATEmix (dermal) 20,209 mg/kg
ATEmix (inhalation-dust/mist) 48.75 mg/l

Information on likely routes of exposure

Inhalation Not an expected route of exposure.
Eye contact Expected to be an irritant based on components.
Skin contact No known hazard in contact with skin.
Ingestion Low order of toxicity based on components.

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.
Skin corrosion/irritation No information available.
Serious eye damage/eye irritation Causes serious eye irritation.
Sensitization No information available.
Mutagenic effects No information available.
Carcinogenic effects No information available.
Reproductive toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Target Organ Effects Eyes, Respiratory system, Kidney, Skin.
Aspiration Hazard No information available.
Other information No information available.

SECTION 12: Ecological information

12.1. Toxicity

No information available.

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
urea	-	LC50 16200 - 18300 mg/L (Poecilia reticulata) 96 h	EC50 3910 mg/L (Daphnia magna) 48 h
glycerol	-	LC50 51 - 57 mL/L (Oncorhynchus mykiss) 96 h	EC50 500 mg/L (Daphnia magna) 24 h
sodium dodecyl sulphate	EC50 53 mg/L (Desmodesmus subspicatus) 72 h EC50 3.59 - 15.6 mg/L (Pseudokirchneriella subcapitata) 96 h EC50 117 mg/L (Pseudokirchneriella subcapitata) 96 h EC50 30 - 100 mg/L (Desmodesmus subspicatus) 96 h	LC50 8 - 12.5 mg/L (Pimephales promelas) 96 h LC50 1.31 mg/L (Cyprinus carpio) 96 h LC50 22.1 - 22.8 mg/L (Pimephales promelas) 96 h LC50 4.3 - 8.5 mg/L (Oncorhynchus mykiss) 96 h LC50 4.62 mg/L (Oncorhynchus mykiss) 96 h LC50 4.2 mg/L (Oncorhynchus mykiss) 96 h LC50 7.97 mg/L (Brachydanio rerio) 96 h LC50 9.9 - 20.1 mg/L (Brachydanio rerio) 96 h LC50 4.06 - 5.75 mg/L (Lepomis macrochirus) 96 h LC50 4.2 - 4.8 mg/L (Lepomis macrochirus) 96 h LC50 4.5 mg/L (Lepomis macrochirus) 96 h LC50 5.8 - 7.5 mg/L (Pimephales promelas) 96 h LC50 10.2 - 22.5 mg/L (Pimephales promelas) 96 h LC50 6.2 - 9.6 mg/L (Pimephales promelas) 96 h LC50 13.5 - 18.3 mg/L (Poecilia reticulata) 96 h LC50 10.8 - 16.6 mg/L (Poecilia reticulata) 96 h LC50 15 - 18.9 mg/L (Pimephales promelas) 96 h	EC50 1.8 mg/L (Daphnia magna) 48 h

12.2. Persistence and degradability

Product is biodegradable.

12.3. Bioaccumulative potential

Bioaccumulation No information available.
Bioconcentration factor (BCF) No information available.

Chemical Name	Octanol-Water Partition Coefficient
urea	-1.59
glycerol	-1.76
sodium dodecyl sulphate	1.6

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

No information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues / unused products Dispose of in accordance with local regulations.
Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.
Other information According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

IMDG/IMO

14.1 UN number Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazards None
14.6 Special precautions for user None
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not regulated

ADR/RID

14.1 UN number Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazards None
14.6 Special precautions for user None

IATA

14.1 UN number Not regulated

14.2 UN proper shipping name	Not regulated
14.3 Transport hazard class(es)	Not regulated
14.4 Packing group	Not regulated
14.5 Environmental hazards	None
14.6 Special precautions for user	None

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Candidate List of Substances of Very High Concern for Authorization Information

This product does not contain Substances of Very High Concern (SVHC).

SEVESO Directive Information

This product does not contain substances identified in the SEVESO Directive.

International inventories

TSCA 8(b)	-
DSL/NDSL	-
EINECS/ELINCS	-
ENCS	-
IECSC	-
KECL	-
PICCS	-
AICS	-

International inventories legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out

SECTION 16: Other information

Full text of H-Statements referred to under Sections 2 and 3

H302 - Harmful if swallowed
H311 - Toxic in contact with skin
H315 - Causes skin irritation
H318 - Causes serious eye damage
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation

Classification procedure:	Expert judgment and weight of evidence determination. Bridging principle "Dilution". Calculation method.
Issuing Date:	2014-06-20
Revision Date:	2017-09-11

Disclaimer

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