

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

Issuing Date: 2017-11-09

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Version: 5

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

1.1. Product identifier

Product No 56795
Product name DNA Library Prep Kit for Illumina® (ChIP-seq, CUT&RUN)
Kit Component 73416: End Prep Enzyme Mix
93209: End Prep Reaction Buffer
30147: Ligation Enhancer
46719: Ligation Master Mix
67488: Q5 PCR Master Mix

Chemical name	Index No.	CAS No
glycerol (>100%)	Not Listed	56-81-5
trometamol (10 - 20%)	Not Listed	77-86-1
dimethyl sulfoxide (10 - 20%)	Not Listed	67-68-5

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

Identified uses For Research Use Only. Not for Use in Diagnostic Procedures.

1.3. Details of the supplier of the safety data sheet

Importer	Manufacturer
Cell Signaling Technology Europe B.V. Dellaertweg 9b 2316 WZ Leiden The Netherlands TEL: +31 (0)71 7200 200 FAX: +31 (0)71 891 0019	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

Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2 - (H319)

2.2. Label elements**Signal word**

Warning.

Hazard statement(s)

H315 - Causes skin irritation.

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.

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P332 + P313 - If skin irritation occurs: Get medical advice/attention.

P337 + P313 - If eye irritation persists: Get medical advice/attention.

P362 + P364 - Take off contaminated clothing and wash it before reuse.

2.3. Other hazards

30 % of the mixture consists of ingredient(s) of unknown acute toxicity.

*For the full text of the H-phrases & EUH-phrases mentioned in this Section, see Section 16***SECTION 3. Composition/information on ingredients****Kit Component** 73416: End Prep Enzyme Mix

Chemical name	CAS No	Weight-%	EC No	Classification (1272/2008)	REACH Registration Number
glycerol	56-81-5	30-60	200-289-5	-	no data available

Kit Component 30147: Ligation Enhancer

Chemical name	CAS No	Weight-%	EC No	Classification (1272/2008)	REACH Registration Number
glycerol	56-81-5	30-60	200-289-5	-	no data available

Kit Component 46719: Ligation Master Mix

Chemical name	CAS No	Weight-%	EC No	Classification (1272/2008)	REACH Registration Number
glycerol	56-81-5	10-30	200-289-5	-	no data available
PEG 6000	25322-68-3	10-30	-	-	no data available
Trade Secret	TRADE SECRET	7-13	-	-	no data available
trometamol	77-86-1	1-5	201-064-4	-	no data available

Kit Component 67488: Q5 PCR Master Mix

Chemical name	CAS No	Weight-%	EC No	Classification (1272/2008)	REACH Registration Number
glycerol	56-81-5	10-30	200-289-5	-	no data available
trometamol	77-86-1	1-5	201-064-4	-	no data available
dimethyl sulfoxide	67-68-5	5-10	200-664-3	-	no data available

Kit Component 93209: End Prep Reaction Buffer

This product does not contain substances at concentrations requiring disclosure under (EC) No. 1907/2006 (REACH).

For the full text of the H-phrases & EUH-phrases mentioned in this Section, see Section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice	Use first aid treatment according to the nature of the injury. When symptoms persist or in all cases of doubt seek medical advice.
Inhalation	Move to fresh air. If breathing is irregular or stopped, administer artificial respiration.
Skin contact	Wash off immediately with soap and plenty of water for at least 15 minutes. If skin irritation or rash occurs: Get medical advice/attention.
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids.
Ingestion	Clean mouth with water and afterwards drink plenty of water.

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

Irritating to eyes and skin.

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 Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin,

eyes and clothing.
For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Local authorities should be advised if significant spillages cannot be contained.

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 Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly.

6.4. Reference to other sections

See Sections 8 & 13 for additional information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Ensure adequate ventilation.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

Use as a laboratory reagent.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Chemical name	European Union	United Kingdom	France	Spain	Germany
glycerol		STEL 30 mg/m ³ TWA 10 mg/m ³	TWA 10 mg/m ³	TWA 10 mg/m ³	Ceiling / Peak: 400 mg/m ³ TWA: 200 mg/m ³
PEG 6000					TWA: 1000 mg/m ³ Ceiling / Peak: 8000 mg/m ³
Trade Secret		STEL: 450 ppm STEL: 1422 mg/m ³ STEL: 30 mg/m ³ TWA: 150 ppm TWA: 474 mg/m ³ TWA: 10 mg/m ³			
dimethyl sulfoxide					TWA: 50 ppm TWA: 160 mg/m ³ Skin Ceiling / Peak: 100 ppm Ceiling / Peak: 320 mg/m ³ H*

Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
glycerol		TWA 10 mg/m ³		TWA 20 mg/m ³	
PEG 6000					TWA 1000 mg/m ³
dimethyl sulfoxide				TWA 50 ppm ih ^o *	TWA 50 ppm TWA 160 mg/m ³
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
glycerol		SS-C** TWA 50 mg/m ³ STEL 100 mg/m ³	TWA 10 mg/m ³		TWA 10 mg/m ³ STEL 30 mg/m ³
PEG 6000	STEL 4000 mg/m ³ TWA 1000 mg/m ³	SS-C** TWA 1000 mg/m ³			
Trade Secret				TWA: 25 ppm mg/m ³ STEL: 25 ppm STEL: 79 mg/m ³	TWA: 150 ppm TWA: 470 mg/m ³ TWA: 10 mg/m ³ STEL: 450 ppm STEL: 1410 mg/m ³ STEL: 30 mg/m ³
dimethyl sulfoxide	H* TWA 50 ppm TWA 160 mg/m ³	H* TWA 50 ppm TWA 160 mg/m ³ STEL 100 ppm STEL 320 mg/m ³			

8.2. Exposure controls

Appropriate engineering controls

Showers, eyewash stations, and ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection

Safety glasses with side-shields

Skin protection

Wear protective gloves and protective clothing

Hand protection

Impervious gloves.

Other

Wear suitable protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental Exposure Controls

No information available.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Information on the known physical chemical properties of each component within Kit are given below. If not included, information is either not available or not applicable. Refer to individual kit component SDS for further information.

Kit Component

Physical state

Color

73416: End Prep Enzyme Mix

Liquid

Colorless

Kit Component

Physical state

Color

93209: End Prep Reaction Buffer

Liquid

Colorless

Kit Component

Physical state

Color

30147: Ligation Enhancer

Liquid

Colorless

Kit Component

Physical state

46719: Ligation Master Mix

Liquid

Color Colorless
Odor Mild

Kit Component **67488: Q5 PCR Master Mix**
Physical state Liquid
Color Colorless
Odor Mild

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 Can react briskly with oxidizers - danger of explosion.

10.4. Conditions to avoid

Extremes of temperature and direct sunlight.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Thermal decomposition can lead to release of irritating and toxic gases and vapors. Carbon monoxide (CO). Carbon dioxide (CO₂).

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Product Information

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.

Component Information

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
glycerol	= 12600 mg/kg (Rat)	> 10 g/kg (Rabbit)	> 570 mg/m ³ (Rat) 1 h
PEG 6000	= 28 g/kg (Rat) = 22 g/kg (Rat)	> 20 mL/kg (Rabbit) > 20 g/kg (Rabbit)	-
trometamol	5900 mg/kg (Rat)	-	-
dimethyl sulfoxide	= 14500 mg/kg (Rat) = 28300 mg/kg (Rat)	= 40 g/kg (Rat)	> 5.33 mg/L (Rat) 4 h

Information on likely routes of exposure

<u>Inhalation</u>	Avoid breathing vapors or mists May cause irritation of respiratory tract
<u>Eye contact</u>	May cause slight irritation
<u>Skin contact</u>	Prolonged contact may cause redness and irritation Repeated exposure may cause skin dryness or cracking
<u>Ingestion</u>	May cause drowsiness or dizziness Ingestion causes burns of the upper digestive and respiratory tract.

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

Symptoms	Irritating to eyes and skin
Skin and Eye Corrosion/Irritation	No information available
Sensitization	No information available
Mutagenic effects	No information available.
Carcinogenic effects	No information available
Reproductive toxicity	No information available.
Systemic Target Organ Toxicity (STOT)	No information available
Aspiration Hazard	No information available.

11.2. Information on other hazards

Other adverse effects	No information available.
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SECTION 12: Ecological information

12.1. Toxicity

Product Information	No information available
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Component Information	No information available
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Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
glycerol	-	LC50 51 - 57 mL/L (Oncorhynchus mykiss) 96 h	EC50 500 mg/L (Daphnia magna) 24 h
PEG 6000	-	LC50 5000 mg/L (Carassius auratus) 24 h	-
Trade Secret	19000: 96 h Pseudokirchneriellasubcapitata mg/L EC50	51400: 96 h Pimephales promelasmg/L LC50 static 710: 96 hPimephales promelas mg/L LC5041 - 47: 96 h Oncorhynchus mykissmL/L LC50 static 51600: 96 hOncorhynchus mykiss mg/L LC50static	10000: 24 h Daphnia magna mg/LEC50 1000: 48 h Daphnia magnamg/L EC50 Static
trometamol	-	-	NOEC >100 mg/L (Selenastrum capricornutum) 96 h
dimethyl sulfoxide	EC50 12350 - 25500 mg/L (Skeletonema costatum) 96 h	LC50 34000 mg/L (Pimephales promelas) 96 h LC50 41.7 g/L (Cyprinus carpio) 96 h LC50 40 g/L	EC50 7000 mg/L (Daphnia species) 24 h

		(Lepomis macrochirus) 96 h LC50 33 - 37 g/L (Oncorhynchus mykiss) 96 h	
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12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

Chemical name	Octanol-Water Partition Coefficient
glycerol	-1.76
dimethyl sulfoxide	-2.03

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Endocrine disrupting properties

This product does not contain any known or suspected endocrine disruptors

12.7. 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	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 Maritime transport in bulk according to IMO instruments	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

Chemical name	French RG number	Title
Trade Secret TRADE SECRET	RG84	

International inventories

TSCA 8(b) -
 DSL/NDSL -
 EINECS/ELINCS -
 ENCS -
 IECS -
 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
 IECS - 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

H315 - Causes skin irritation
 H319 - Causes serious eye irritation

Classification procedure: Expert judgment and weight of evidence determination.

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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.