



# Cell Signaling

TECHNOLOGY®

**SAFETY DATA SHEET (SDS):** According to the OSHA Hazard Communication Standard 29 CFR 1910.1200

**Issuing Date:** 2014-03-13

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**Version:** 1

## SECTION 1. Identification

### Product identifier

**Product No.** 12819  
**Product name** Tunicamycin  
**UN number** UN3462  
**Other means of identification** 12819M, 12819S

### 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

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 2
Acute toxicity - Dermal	Category 2
Acute toxicity - Inhalation (Dusts/Mists)	Category 2
Reproductive toxicity	Category 1B

### GHS Label elements, including precautionary statements



**Signal Word**

Danger

**Hazard statement(s)**

Fatal if swallowed  
 Fatal in contact with skin  
 Fatal if inhaled  
 May damage fertility or the unborn child

**Precautionary Statement(s)**

Obtain special instructions before use  
 Use personal protective equipment as required  
 Wear protective gloves and protective clothing IF exposed or concerned: Get medical advice/attention  
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
 IF ON SKIN: Gently wash with plenty of soap and water

**Supplementary Hazard Information**

**Hazards not otherwise classified (HNOC)** None

**Unknown Acute Toxicity** 100% of the mixture consists of ingredient(s) of unknown toxicity.

### SECTION 3. Composition/information on ingredients

**Formula**  $C_{39}H_{60}N_4O_{16}$   
**Molecular Weight** 840.9  
**Chemical nature** Monoconstituent substance.  
**Common name** Tunicamycin  
**Synonyms** NSC 177382, Tunicamycin

Chemical Name	CAS No.	Weight %
Tunicamycin, lysosuperficus	11089-65-9	100

### 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** Immediate medical attention is required. Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

**Inhalation** Immediate medical attention is required. Move to fresh air. If not breathing, give artificial respiration.

**Ingestion** Do NOT induce vomiting. Immediate medical attention is required. Never give anything by mouth to an unconscious person. Drink plenty of water. Rinse mouth.

**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** Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

**Protection of First-aiders** Use personal protective equipment. Avoid contact with skin, eyes and clothing.

## 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.
- Sensitivity to Static Discharge** None.

### Protective Equipment and Precautions for Firefighters

Wear self-contained breathing apparatus and protective suit.

## SECTION 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** Use personal protective equipment. Keep people away from and upwind of spill/leak.
- Other information** No information available.

### Environmental precautions

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. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.
- Methods for cleaning up** Use personal protective equipment. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically and collect in suitable container for disposal. Avoid dust formation. Clean contaminated surface thoroughly.

## 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** None known based on information supplied.

## SECTION 8. Exposure controls/personal protection

### Control parameters

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

### Appropriate engineering controls

Showers, eyewash stations, and ventilation systems.

### Individual protection measures, such as personal protective equipment

Personal protective equipment (PPE) needs to be selected depending on the implemented engineering controls, frequency/duration of work activities and the concentrations of the hazardous substance.

<b>Eye/face protection</b>	Tightly fitting safety goggles.
<b>Skin and body protection</b>	Wear protective gloves/clothing.
<b>Respiratory protection</b>	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.
<b>Hygiene measures</b>	When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use.

## SECTION 9. Physical and chemical properties

### Information on basic physical and chemical properties

<b>Physical state</b>	Solid
<b>Appearance</b>	Powder
<b>Odor</b>	No information available
<b>Color</b>	Off-white
<b>Odor Threshold</b>	No information available
<b>pH</b>	No information available
<b>Melting point/freezing point</b>	234-235 °C
<b>Initial boiling point and boiling range</b>	No information available
<b>Flash point</b>	No information available
<b>Evaporation rate</b>	No information available
<b>Flammability (solid, gas)</b>	No information available
<b>Upper flammability limit</b>	No information available
<b>Lower flammability limit</b>	No information available
<b>Vapor pressure</b>	No information available
<b>Vapor density</b>	No information available
<b>Relative density</b>	No information available
<b>Solubility</b>	No information available
<b>Solubility in other solvents</b>	No information available
<b>Partition coefficient: n-octanol/water</b>	No information available
<b>Autoignition temperature</b>	No information available
<b>Decomposition temperature</b>	No information available
<b>Explosive properties</b>	No information available
<b>Oxidizing properties</b>	No information available
<b>Molecular Weight</b>	840.9
<b>VOC content</b>	No information available
<b>Viscosity</b>	No information available
<b>Density</b>	No information available

## SECTION 10. Stability and reactivity

**Reactivity**

No information available.

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

<b>Hazardous reactions</b>	None under normal processing.
<b>Hazardous polymerization</b>	None under normal processing.

**Conditions to Avoid**

No information available.

**Incompatible Materials**

None known based on information supplied.

**Hazardous Decomposition Products**

None known based on information supplied.

<b>SECTION 11. Toxicological information</b>
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**Information on likely routes of exposure**

<b>Inhalation</b>	May be fatal if inhaled.
<b>Eye contact</b>	There is no data available for this product.
<b>Skin contact</b>	May be fatal if absorbed through skin.
<b>Ingestion</b>	May be fatal if swallowed.

**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.

<b>Unknown Acute Toxicity</b>	100% of the mixture consists of ingredient(s) of unknown toxicity.
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<b>ATEmix (oral)</b>	5 mg/kg
<b>ATEmix (dermal)</b>	50 mg/kg
<b>ATEmix (inhalation-dust/mist)</b>	0.05 mg/l

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

<b>Symptoms</b>	No information available.
<b>Corrosivity</b>	No information available.
<b>Sensitization</b>	No information available.
<b>Mutagenic effects</b>	No information available.
<b>Carcinogenicity</b>	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.
<b>Reproductive toxicity</b>	May cause birth defects. May impair fertility.
<b>STOT - single exposure</b>	No information available.

<b>STOT - repeated exposure</b>	No information available.
<b>Chronic Toxicity</b>	Prolonged or repeated exposure increases the risk. Possible risks of irreversible effects.
<b>Target Organ Effects</b>	Liver, Systemic Toxicity, Reproductive system.
<b>Neurological effects</b>	No information available.
<b>Aspiration Hazard</b>	No information available.

## SECTION 12. Ecological information

### Ecotoxicity

100% of the mixture consists of component(s) of unknown hazards to the aquatic environment

<b>Persistence and degradability</b>	No information available.
<b>Bioaccumulation</b>	No information available.
<b>Mobility</b>	No information available.

### Other adverse effects

No information available.

## SECTION 13. Disposal considerations

### Waste Disposal Methods

Should not be released into the environment.

### Disposal considerations

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

## SECTION 14. Transport information

### DOT

<b>UN number</b>	UN3462
<b>UN proper shipping name</b>	Toxins, extracted from living sources, solid, n.o.s. (Tunicamycin, lysosuperficus)
<b>Transport hazard class(es)</b>	6.1
<b>Packing Group</b>	II
<b>Special precautions for user</b>	141, IB8, IP2, IP4, T3, TP33
<b>Emergency Response Guide Number</b>	153

### IATA

<b>UN number</b>	UN3462
<b>UN proper shipping name</b>	Toxins, extracted from living sources, solid, n.o.s. (Tunicamycin, lysosuperficus)
<b>Transport hazard class(es)</b>	6.1
<b>Packing Group</b>	II
<b>Special precautions for user</b>	A3, A43

### IMDG/IMO

<b>UN number</b>	UN3462
<b>UN proper shipping name</b>	Toxins, extracted from living sources, solid, n.o.s. (Tunicamycin, lysosuperficus)
<b>Transport hazard class(es)</b>	6.1
<b>Packing group</b>	II
<b>EmS No.</b>	F-A, S-A
<b>Special precautions for user</b>	210, 274

## SECTION 15. Regulatory information

### North American Inventory Listing

Component	TSCA	DSL	NDSL
Tunicamycin, lysosuperficus 11089-65-9 ( 100 )	Not Listed	Not Listed	Not Listed

### 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

<b>Acute Health Hazard</b>	Yes
<b>Chronic Health Hazard</b>	Yes
<b>Fire Hazard</b>	No
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	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

This product does not contain any substances regulated under applicable state right-to-know regulations

### U.S. EPA Label Information

This product does not contain any substances regulated as pesticides.

## SECTION 16. Other information

**Issuing Date:** 2014-03-13

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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.

End of Safety Data Sheet