

**1. PRODUCT AND COMPANY IDENTIFICATION**

<b>Product Name</b>	<b>Doxorubicin</b>
<b>Product Number</b>	<b>5927</b>
<b>Identified Uses</b>	For Research Use Only (RUO). Not intended for use in humans or animals. Not intended for therapeutic or diagnostic procedures.
<b>Manufacturer/Supplier</b>	Cell Signaling Technology, Inc. 3 Trask Lane Danvers, MA 01923 USA
<b>Phone #:</b>	978-867-2300

**2. HAZARDS IDENTIFICATION**

**Emergency Overview**



**Danger**

OSHA Hazards  
 Target organ effect. Harmful by ingestion, Irritant, Carcinogen

GHS Classification  
 Acute Toxicity, Oral (Category 4)  
 Carcinogenicity (Category 1B)

**Physical State**  
 Solid

**Potential Health Effects**

**Acute Toxicity**

Eyes	Causes eye irritation.
Skin	Harmful if absorbed through skin. Causes skin irritation.
Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion	Harmful if swallowed.

**Target organ effects**      Heart, Bone marrow, Blood, LiverHeart, Bone marrow, Blood, Liver

**Chronic Effects**

Carcinogenic effects	This product is or contains a component that is reported to be probably carcinogenic based on IARC, OSHA, ACGIH, NTP, or EPA classification.
Mutagenic effects	No data available
Reproductive toxicity	No data available
Sensitization	No data available

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Hazardous Ingredients**

Chemical Name	CAS No.	EC No.	Concentration
Doxorubicin	25316-40-9	246-818-3	>98%

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**4. FIRST AID MEASURES**


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<b>Eye Contact</b>	Rinse immediately with plenty of water for at least 15 minutes. Get medical attention.
<b>Skin Contact</b>	Rinse immediately with soap and plenty of water. Get medical attention immediately.
<b>Inhalation</b>	Move to fresh air. Get medical attention.
<b>Ingestion</b>	Call Poison Control immediately. Never give anything by mouth to an unconscious person. Rinse mouth with water.
<b>Notes to physician</b>	Treat symptomatically.

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**5. FIRE FIGHTING MEASURES**


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<b>Flash Point</b>	<b>Not flammable.</b> See Section 9. Physical and Chemical Properties
<b>Suitable Extinguishing Media</b>	Use dry chemical , water spray, alcohol resistant foam or carbon dioxide.
<b>Special exposure hazards</b>	Hazardous decomposition products formed under fire conditions –toxic gases can be evolved.
<b>Special protection for fire fighters</b>	Wear self-contained breathing apparatus and protective unit
<b>Other information</b>	No data available

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**6. ACCIDENTAL RELEASE MEASURES**


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<b>Personal precautions</b>	Avoid contact with skin, eyes, clothing. Avoid creating dusts during clean up.
<b>Environmental precautions</b>	Prevent product from entering drains. Prevent further spillage if safe to do so.

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**7. HANDLING AND STORAGE**


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<b>Safe handling advice</b>	Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice.
<b>Storage conditions</b>	Keep container tightly closed in cool dry place.
<b>Incompatibilities</b>	No data available
<b>Specific end uses</b>	No data available

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**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**


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**Exposure Limits**

This product contains no substances with established exposure limit values.

**Engineering Measures**

Emergency eyewash and safety shower. Mechanical exhaust required.

**Hygiene Measures**

Do not eat, drink or smoke when handling product. Wear suitable gloves and eye/face protection. Wash hands thoroughly after handling product. Regular cleaning of equipment, work area and clothing is recommended. Wash contaminated clothing before reuse.

**Personal Protective Equipment**

Respiratory Protection

In case of insufficient ventilation wear suitable respiratory protective equipment tested and approved under appropriate government standards such as NIOSH, CEN)

**Eye Protection:**

Face shield and safety glasses tested and approved under appropriate government standards such as NIOSH,

**Skin and body protection:**

Wear suitable protective clothing, protective shoes or boots.

**Hand protection:**

Wear compatible chemical resistant gloves. Dispose of gloves in accordance with applicable laws and good laboratory practices.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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### Information on basic physical and chemical properties

Physical State	crystalline solid, granular or powder
Appearance	orange
Odor	no data available
pH	no data available
Melting point/freezing point	no data available
Boiling point	no data available
Evaporation rate	no data available
Flash point	no data available
Autoignition temperature	no data available
Flammability limits in air	no data available
Explosive properties	no data available
VOC content	no data available
Decomposition temperature	no data available
Solubility	Soluble in DMSO

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## 10. STABILITY AND REACTIVITY

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<b>Stability</b>	Stable under normal conditions.
<b>Conditions/Materials to avoid</b>	Moisture sensitive. Light sensitive.
<b>Hazardous decomposition products</b>	Carbon oxides, nitrogen oxides.

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## 11. TOXICOLOGICAL INFORMATION

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### Acute Toxicity

To the best of our knowledge, the chemical, physical and toxicological properties have not been fully investigated.

Acute Oral Toxicity (LD50) 698 mg/kg (mouse)

Inhalation LD50 Irritating to respiratory system

### Routes of Exposure

#### Potential Health Effects

#### Acute Toxicity

#### Acute Toxicity

Eyes

Causes eye irritation.

Skin Harmful if absorbed through skin. Causes skin irritation.  
Inhalation May be harmful if inhaled. Causes respiratory tract irritation.  
Ingestion Harmful if swallowed.

**Target organ effects** Heart, Bone marrow, Blood, LiverHeart, Bone marrow, Blood, Liver

**Chronic Effects**

Carcinogenic effects This product is or contains a component that is reported to be probably carcinogenic based on IARC, OSHA, ACGIH, NTP, or EPA classification.  
Mutagenic effects No data available  
Reproductive toxicity No data available  
Sensitization No data available

Additional Information: RTECS Q19295900

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**12. ECOLOGICAL INFORMATION**

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**Ecotoxicity** Toxic to aquatic organisms

**Persistence and degradability** No data available

**Bioaccumulation** No data available

**Mobility** No data available

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**13. DISPOSAL CONSIDERATIONS**

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**Waste Disposal Methods** Dispose of in accordance with all applicable environmental laws and regulations.

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**14. TRANSPORT INFORMATION**

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**IATA** Not regulated for transport

**DOT** Not regulated for transport

**IMDG** Not regulated for transport

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**15. REGULATORY INFORMATION**

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**OSHA Hazards**

Target organ effect. Harmful by ingestion, Irritant, Carcinogen

**GHS Classification**

Acute Toxicity, Oral (Category 4)  
Carcinogenicity (Category 1B)

Signal Word: Danger

Pictogram:



Hazard Statements

H302 Harmful if swallowed.  
 H350 May cause cancer.

Precautionary Statements

P201 Obtain special instructions before use.  
 P308 + P313 IF exposed or concerned: Get medical advice.

**U.S. Federal Regulations**

**SARA 302**

No components are subject to reporting requirements established by SARA Title III, Section 302.

**SARA 311/312**

Acute Health Hazard/Chronic Health Hazard

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals that exceed the reporting levels of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**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)

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product does not contain any substances regulated as hazardous air pollutants (HAPs) under Section 112 of the Clean Air Act Amendments of 1990.

**U.S. State Regulations**

Massachusetts Right-to-Know Components:	None	-
New Jersey Right-to-Know Components:	Doxorubicin	CAS# 25316-40-9
Pennsylvania Right-to-Know Components:	Doxorubicin	CAS# 25316-40-9

**California Proposition 65**

Warning! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm:	Doxorubicin	CAS# 25316-40-9
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**WHMIS Hazard Class**

Not WHMIS controlled.

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

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**16. OTHER INFORMATION**

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**Revision date** 2012-08-10  
**Revision Note** \*\*\*Indicates updated section

**Disclaimer**

The information provided on this material safety data sheet is to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of Material Safety Data Sheet