

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

**Issuing Date:** 2014-03-19

**Revision Date:** 2017-08-28

**Version:** 2

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

### 1.1. Product identifier

**Product No** 12808  
**Product name** PDBu (Phorbol 12,13-Dibutyrate)  
**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

**Formula** C<sub>28</sub>H<sub>40</sub>O<sub>8</sub>  
**Molecular Weight** 504.61  
**Other means of identification** 12808S

### 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

<b>Importer (Applicable in EU only)</b> 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	<b>Manufacturer</b> Cell Signaling Technology, Inc. 3 Trask Lane Danvers, MA 01923 United States TEL: +1 978 867 2300 FAX: +1 978 867 2400
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**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

<b>Skin corrosion/irritation</b>	Category 2 - (H315)
<b>Serious eye damage/eye irritation</b>	Category 2 - (H319)
<b>Carcinogenicity</b>	Category 2 - (H351)
<b>Specific target organ toxicity - single exposure (STOT SE)</b>	Category 3 - (H335)

## 12808 PDBu (Phorbol 12,13-Dibutyrate)

### 2.2. Label elements



#### Signal word

Warning

#### Hazard statement(s)

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H351 - Suspected of causing cancer

H335 - May cause respiratory irritation

#### Precautionary statement(s)

P201 - Obtain special instructions before use

P280 - Wear protective gloves/protective clothing/eye protection/face protection

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

P362 - Take off contaminated clothing and wash before reuse

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

P308 + P313 - IF exposed or concerned: Get medical advice/attention

### 2.3. Other hazards

100 % of the mixture consists of ingredient(s) of unknown acute toxicity.

None under normal use conditions.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

#### Common name

PDBu

#### Synonyms

Phorbol 12,13-dibutyrate; PDBu; Phorbol ester; P(Bu)<sub>2</sub>

#### Formula

C<sub>28</sub>H<sub>40</sub>O<sub>8</sub>

#### Chemical nature

Monoconstituent substance.

Chemical Name	CAS No	Weight %	EC No	Classification (1272/2008)	REACH Registration Number
Butanoic acid, 1,1a,1b,4,4a,5,7a,7b,8,9-decahydro-4a,7b-dihydroxy-3-(hydroxymethyl)-1,1,6,8-tetramethyl-5-oxo-9a-h-cyclopropa(3,4)benz(1,2-e)azulene-9,9a-diyl ester, (1aR-(1a-alpha,1b-beta,4a-beta,7a-alpha,7b-alpha,8-alpha,9-beta,9a-alpha))-	37558-16-0	100	-	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335) Carc. 2 (H351)	no data available

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

<b>General advice</b>	Use first aid treatment according to the nature of the injury. When symptoms persist or in all cases of doubt seek medical advice.
<b>Inhalation</b>	Move to fresh air.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>Ingestion</b>	Clean mouth with water and afterwards drink plenty of water.

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

#### 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

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Unsuitable Extinguishing Media</b>	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

<b>For non-emergency personnel</b>	Evacuate personnel to safe areas. Ensure adequate ventilation.
<b>For emergency responders</b>	Use personal protection recommended in Section 8.

#### 6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

#### 6.3. Methods and material for containment and cleaning up

<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Use personal protective equipment. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid dust formation. 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.

**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**

**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**

**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**

<b>Physical state</b>	Solid
<b>Appearance</b>	Powder
<b>Color</b>	White
<b>Odor</b>	No information available
<b>Odor Threshold</b>	No information available

<b>Property</b>	<b>Values</b>	<b>Remarks • Method</b>
<b>pH</b>		No information available
<b>Melting point/freezing point</b>		No information available
<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>	Insoluble	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>Viscosity</b>		No information available
<b>Explosive properties</b>		No information available
<b>Oxidizing properties</b>		No information available

**9.2. Other information**

## 12808 PDBu (Phorbol 12,13-Dibutyrate)

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<b>Softening point</b>	No information available
<b>Molecular Weight</b>	504.61
<b>Solubility in other solvents</b>	No information available
<b>VOC content</b>	No information available
<b>Density</b>	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

<b>Hazardous polymerization</b>	Hazardous polymerization does not occur.
<b>Hazardous reactions</b>	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.

<b>Unknown Acute Toxicity</b>	100 % of the mixture consists of ingredient(s) of unknown acute toxicity.
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#### **Information on likely routes of exposure**

<b>Inhalation</b>	Inhalation of dust in high concentration may cause irritation of respiratory system.
<b>Eye contact</b>	Expected to be an irritant based on components.
<b>Skin contact</b>	Expected to be an irritant based on components.
<b>Ingestion</b>	There is no data available for this product.
<b>Symptoms</b>	No information available.
<b>Skin corrosion/irritation</b>	Irritating to skin.
<b>Serious eye damage/eye irritation</b>	Irritating to eyes.
<b>Sensitization</b>	No information available.
<b>Mutagenic effects</b>	No information available.
<b>Carcinogenic effects</b>	Potent skin tumor promoter.
<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	Respiratory system.
<b>STOT - repeated exposure</b>	No information available.
<b>Target Organ Effects</b>	Skin, Eyes, Respiratory system.

## 12808 PDBu (Phorbol 12,13-Dibutyrate)

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**Aspiration Hazard** No information available.  
**Other information** No information available.

### SECTION 12: Ecological information

#### 12.1. Toxicity

No information available.

**Unknown Aquatic Toxicity** 100% of the mixture consists of components of unknown hazards to the aquatic environment.

#### 12.2. Persistence and degradability

No information available.

#### 12.3. Bioaccumulative potential

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

#### 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** 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

## 12808 PDBu (Phorbol 12,13-Dibutyrate)

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

H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H335 - May cause respiratory irritation  
H351 - Suspected of causing cancer

**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.