

**Safety Data Sheet (SDS)** According to the OSHA Hazard Communication Standard 29 CFR 1910.1200

**Issuing Date:** 2018-04-11

**Version:** 1

## SECTION 1. Identification

### Product identifier

**Product No** 8819  
**Product name** Active Cdc42 Detection Kit  
**Kit Component** **GST-Human Pak1-PBD**  
**Cdc42 Mouse mAb**  
**GDP**  
**GTP gamma-S**  
**Glutathione Resin**  
**SDS Sample Buffer**  
**Lysis/Binding/Wash Buffer**

### Recommended use of the chemical and restrictions on use

**Identified uses** This product is intended for research purposes only.  
**Manufacturer, importer, supplier**

**Manufacturer address** 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  
**Email address** support@cellsignal.com  
**Emergency telephone number** In case of emergency call CHEMTREC 1-800-424-9300

## SECTION 2. Hazard(s) identification

### Classification

This substance/mixture is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<b>Skin corrosion/irritation</b>	Category 2
<b>Serious eye damage/eye irritation</b>	Category 1

### GHS Label elements, including precautionary statements



**Signal Word**

Danger

**Hazard statement(s)**

Causes serious eye damage. Causes skin irritation.

**Precautionary Statement(s)**

Wear protective gloves/protective clothing/eye protection/face protection. Wash face, hands and any exposed skin thoroughly after handling.

IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

**Supplementary Hazard Information**

No information available.

**Hazards not otherwise classified (HNOC)**

Not applicable.

**Unknown Acute Toxicity** 0% of the mixture consists of ingredient(s) of unknown acute toxicity

### SECTION 3. Composition/information on ingredients

**Kit Component Name** GDP

Chemical Name	CAS No	Weight %
guanosine 5'-(disodium hydrogen pyrophosphate)	7415-69-2	98-100

**Kit Component Name** GTP gamma-S

Chemical Name	CAS No	Weight %
Guanosine 5'-(trihydrogen diphosphate), monoanhydride with phosphorothioic acid, tetralithium salt	94825-44-2	60-100

**Kit Component Name** Glutathione Resin

Chemical Name	CAS No	Weight %
sodium azide	26628-22-8	<0.1
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	<0.0015

**Kit Component Name** SDS Sample Buffer

Chemical Name	CAS No	Weight %
glycerol	56-81-5	10-20
trometamol	77-86-1	1-3
sodium dodecyl sulphate	151-21-3	3-5

**Kit Component Name** Lysis/Binding/Wash Buffer

Chemical Name	CAS No	Weight %
glycerol	56-81-5	3-5

**Kit Component Name** GST-Human Pak1-PBD, Cdc42 Mouse mAb

This product does not contain substances at concentrations requiring disclosure under 29 CFR 1910.1200 (OSHA Hazard Communication Standard).

### SECTION 4. First-aid measures

<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Immediate medical attention is required.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If symptoms persist, call a physician.
<b>Inhalation</b>	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
<b>Ingestion</b>	Do not induce vomiting without medical advice. Clean mouth with water and afterwards drink plenty of water. Never give anything by mouth to an unconscious person. Consult a physician.

**Most important symptoms and effects, both acute and delayed**

Corrosive to the eyes and may cause severe damage including blindness. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Skin irritation. Respiratory irritation.

**Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**Advice for emergency responders**

<b>General advice</b>	For further assistance, contact your local Poison Control Center.
<b>Protection of first-aiders</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

## SECTION 5. Fire-fighting measures

**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>	CAUTION: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical**

No information available.

<b>Hazardous Combustion Products</b>	Carbon oxides (COx). Nitrogen oxides (NOx). Sulfur oxides. Phosphorus oxides. Hazardous metal fumes and oxides.
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**Explosion Data**

<b>Sensitivity to Mechanical Impact</b>	None.
<b>Sensitivity to Static Discharge</b>	None.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## SECTION 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**

<b>For non-emergency personnel</b>	Use personal protective equipment. Avoid contact with skin, eyes and clothing. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
<b>Other information</b>	No information available.

**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. Do not flush into surface water or sanitary sewer system. Prevent product from entering drains.

**Methods and material for containment and cleaning up****Methods for containment  
Methods for cleaning up**

Prevent further leakage or spillage if safe to do so.  
Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.  
Clean contaminated surface thoroughly.

**SECTION 7. Handling and storage****Precautions for safe handling**

Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Use only in area provided with appropriate exhaust ventilation.

**Conditions for safe storage, including any incompatibilities**

**Technical measures/Storage conditions** Keep container tightly closed in a dry and well-ventilated place. Protect from light.  
**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.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH REL
glycerol	-	TWA mist, total particulate: 15 mg/m <sup>3</sup> TWA mist, respirable fraction: 5 mg/m <sup>3</sup>	-
sodium azide	Ceiling: 0.29 mg/m <sup>3</sup> Ceiling: 0.11 ppm	-	Ceiling: 0.1 ppm Ceiling: 0.3 mg/m <sup>3</sup>

**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.

**Eye/face protection** Safety glasses with side-shields.  
**Skin and body protection** Wear protective gloves/clothing.  
**Respiratory protection** 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.  
**Hygiene measures** Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Provide regular cleaning of equipment, work area and clothing.

**SECTION 9. Physical and chemical properties****Information on basic physical and chemical properties**

Kit Component

GST-Human Pak1-PBD

Physical state	Liquid
Appearance	Clear
Color	Colorless
Odor	Odorless
pH VALUE	7.5
Kit Component	<b>Cdc42 Mouse mAb</b>
Physical state	Liquid
Appearance	Clear
Color	Colorless
Odor	Odorless
Kit Component	<b>GDP</b>
Physical state	Solid
Color	White
Kit Component	<b>GTP gamma-S</b>
Physical state	Solid
Appearance	Powder
Color	White
Odor	Unpleasant
Kit Component	<b>Glutathione Resin</b>
Physical state	Liquid
Appearance	Suspension
Color	Off-white
Odor	Odorless
Kit Component	<b>SDS Sample Buffer</b>
Physical state	Liquid
Color	Blue
Odor	Odorless
pH VALUE	6.8
Kit Component	<b>Lysis/Binding/Wash Buffer</b>
Physical state	Liquid
Appearance	Clear
Color	Colorless
Odor	Odorless
pH VALUE	7.1 - 7.3

## 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**

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

## **SECTION 11. Toxicological information**

### **Information on likely routes of exposure**

#### **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.

#### **Inhalation**

Kit Component	GTP gamma-S
Inhalation	May cause irritation of respiratory tract

#### **Eye contact**

Kit Component	Lysis/Binding/Wash Buffer
Eye contact	Expected to be an irritant based on components
Kit Component	SDS Sample Buffer
Eye contact	Corrosive to the eyes and may cause severe damage including blindness
Kit Component	GTP gamma-S
Eye contact	May cause irritation

#### **Skin contact**

Kit Component	SDS Sample Buffer
Skin contact	Expected to be an irritant based on components
Kit Component	GTP gamma-S
Skin contact	Irritating to skin

#### **Ingestion**

Kit Component	SDS Sample Buffer
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea

### **Information on toxicological effects**

#### **Component Information**

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
glycerol	= 12600 mg/kg (Rat)	> 10 g/kg ( Rabbit )	> 570 mg/m <sup>3</sup> ( Rat ) 1 h
trometamol	5900 mg/kg ( Rat )	-	-
sodium dodecyl sulphate	= 1288 mg/kg (Rat) = 1783 mg/kg (Rat)	= 200 mg/kg ( Rabbit )	> 3900 mg/m <sup>3</sup> ( Rat ) 1 h
Nonylphenol, ethoxylated	= 1310 mg/kg ( Rat )	= 1780 mg/kg ( Rabbit )	-
sodium azide	= 27 mg/kg (Rat)	= 20 mg/kg ( Rabbit ) = 50 mg/kg (	-

reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1)	= 53 mg/kg (Rat) = 481 mg/kg (Rat)	Rat ) -	= 1.23 mg/L ( Rat ) 4 h
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### **Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Symptoms** Corrosive to the eyes and may cause severe damage including blindness, Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting, Skin irritation, Respiratory irritation.

### **Skin and Eye Corrosion/Irritation**

Kit Component	Lysis/Binding/Wash Buffer
Serious eye damage/eye irritation	Irritating to eyes
Kit Component	SDS Sample Buffer
Skin corrosion/irritation	Irritating to skin
Serious eye damage/eye irritation	Risk of serious damage to eyes

**Sensitization** No information available

**Mutagenic effects** No information available

**Carcinogenicity** 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.

**Reproductive toxicity** No information available.

### **Systemic Target Organ Toxicity (STOT)**

Kit Component	GTP gamma-S
STOT - single exposure	May cause disorder and damage to the Respiratory system

**Aspiration Hazard** No information available.

## **SECTION 12. Ecological information**

### **Ecotoxicity**

**Product Information** No information available

**Component Information** No information available

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
trometamol	-	-	NOEC >100 mg/L (Selenastrum capricornutum) 96 h
sodium dodecyl sulphate	EC50 53 mg/L (Desmodesmus subspicatus) 72 h EC50 30 - 100 mg/L (Desmodesmus subspicatus) 96 h EC50 42 mg/L (Desmodesmus subspicatus) 96 h EC50 3.59 - 15.6 mg/L (Pseudokirchneriella subcapitata) 96 h EC50 117 mg/L (Pseudokirchneriella subcapitata) 96 h	LC50 8 - 12.5 mg/L (Pimephales promelas) 96 h LC50 4.1 mg/L (Leuciscus idus) 48 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 -	EC50 21.2 mg/L (Daphnia magna) 24 h EC50 1.8 mg/L (Daphnia magna) 48 h

		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 1.31 mg/L (Cyprinus carpio) 96 h LC50 15 - 18.9 mg/L (Pimephales promelas) 96 h	
Nonylphenol, ethoxylated	-	LC50 1.0 - 9.7 mg/L (Lepomis macrochirus) 96 h	-
sodium azide	EC50 0.35 mg/L (Pseudokirchneriella subcapitata) 96 h	LC50 0.8 mg/L (Oncorhynchus mykiss) 96 h LC50 5.46 mg/L (Pimephales promelas) 96 h LC50 0.7 mg/L (Lepomis macrochirus) 96 h	LC100 1 mg/L (Orconectes rusticus) 96 h
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1)	EC50 0.11 - 0.16 mg/L (Pseudokirchneriella subcapitata) 72 h EC50 0.31 mg/L (Anabaena flos-aquae) 120 h EC50 0.03 - 0.13 mg/L (Pseudokirchneriella subcapitata) 96 h	LC50 1.6 mg/L (Oncorhynchus mykiss) 96 h	EC50 4.71 mg/L (Daphnia magna) 48 h EC50 0.71 - 0.99 mg/L (Daphnia magna) 48 h EC50 0.12 - 0.3 mg/L (Daphnia magna) 48 h

**Persistence and degradability** No information available

#### Bioaccumulation

Kit Component Bioaccumulation	Glutathione Resin Most components of this material are unlikely to bioaccumulate but some have not been tested
Kit Component Bioaccumulation	Lysis/Binding/Wash Buffer Does not bioaccumulate
Kit Component Bioaccumulation	SDS Sample Buffer Not likely to bioaccumulate

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

**Mobility** No information available

#### Other adverse effects

No information available.

### SECTION 13. Disposal considerations

#### Waste Disposal Methods

Dispose of in accordance with all applicable national environmental laws and regulations.

#### Disposal considerations

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



## SECTION 14. Transport information

This material is not subject to regulation as a hazardous material for shipping.

## SECTION 15. Regulatory information

### North American Inventory Listing

Chemical Name	TSCA 8(b)	TSCA 12(b)	DSL	NDSL
Guanosine 5'-(trihydrogen diphosphate), monoanhydride with phosphorothioic acid, tetralithium salt	Not Listed	Not Listed	Not Listed	Not Listed
glycerol	Listed	Not Listed	Listed	Not Listed
trometamol	Listed	Not Listed	Listed	Not Listed
sodium dodecyl sulphate	Listed	Not Listed	Listed	Not Listed
glutathione	Listed	Not Listed	Listed	Not Listed
Nonylphenol, ethoxylated	Listed	Not Listed	Listed	Not Listed
sodium azide	Listed	Not Listed	Listed	Not Listed
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1)	Not Listed	Section 5: 1 %	Listed	Not Listed

### SARA 313

Refer to kit component SDS for full SARA Section 313 reporting requirements.

Chemical Name	CAS No	SARA 313 - Threshold Values %
sodium azide	26628-22-8	1.0

### SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	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

Refer to kit component SDS for full Comprehensive Environmental Response Compensation and Liability Act (CERCLA) reporting requirements.

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
sodium azide	1000 lb	1000 lb

### California Proposition 65

This product does not contain any Proposition 65 chemicals.

### U.S. State Right-to-Know Regulations

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Refer to kit component SDS for applicable State Right-To-Know (RTK) information.

Chemical Name	New Jersey	Massachusetts	Pennsylvania
glycerol	Listed	Listed	Listed
sodium azide	Listed	Listed	Listed

<b>SECTION 16. Other information</b>
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**Issuing Date:** 2018-04-11

**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