

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** Kinase Buffer (10X)  
**Pure substance/preparation** Substance Preparation  
**Identified uses** For research use only, Not for use in humans.

**Manufacturer**  
 Cell Signaling Technology, Inc.  
 3 Trask Lane  
 Danvers, MA 01923  
 TEL: 978-867-2300

## 2. HAZARDS IDENTIFICATION

<b>Emergency Overview</b>		
The product contains no substances which at their given concentration, are considered to be hazardous to health.		
<b>Appearance</b> aqueous solution	<b>Physical State</b> liquid	<b>Odor</b> No information available

### Potential Health Effects

#### Acute Toxicity

<b>Eyes</b>	May cause slight irritation.
<b>Skin</b>	No known effect based on information supplied.
<b>Inhalation</b>	No known effect based on information supplied.
<b>Ingestion</b>	No known effect based on information supplied.

#### Chronic Effects

<b>Chronic toxicity</b>	No known effect based on information supplied.
<b>Aggravated Medical Conditions</b>	None known.
<b>Environmental hazard</b>	See Section 12 for additional Ecological Information.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %	EC-No
Trisodium orthovanadate	13721-39-6	<0.05	237-287-9

## 4. FIRST AID MEASURES

**Eye contact** In case of contact, immediately flush eyes with plenty of water.

**Skin contact** Wash off immediately with soap and plenty of water.

**Inhalation** Move to fresh air.

**Ingestion** Never give anything by mouth to an unconscious person. Clean mouth with water.

## 5. FIRE-FIGHTING MEASURES

**Flammable Properties**  
**Suitable Extinguishing Media**  
**Protective Equipment and Precautions for Firefighters**

Not flammable.  
Dry chemical, CO, alcohol-resistant foam or water spray.  
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**NFPA**                      **Health Hazard 0**                      **Flammability 0**                      **Stability 0**                      **Physical and chemical hazards -**

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions**                      Avoid contact with skin, eyes and clothing.

**Methods for Containment**                      Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up**                      Prevent product from entering drains.

**7. HANDLING AND STORAGE**

**Advice on safe handling**                      Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice.

**Technical measures/Storage conditions**                      Keep container tightly closed. Recommended storage temperature 4 °C

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Exposure Guidelines**                      This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Engineering Measures**                      Showers, eyewash stations, and ventilation systems.

**Hygiene measures**                      When using, do not eat, drink or smoke Wear suitable gloves and eye/face protection Wash hands before breaks and at the end of workday Wash hands with water as a precaution Regular cleaning of equipment, work area and clothing is recommended Avoid breathing vapors, mist or gas

**Personal Protective Equipment**

**Respiratory protection**                      None required under normal usage. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

**Eye/Face Protection**                      Safety glasses with side-shields

**Skin and body protection**                      Protective gloves.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	liquid
<b>Appearance</b>	aqueous solution
<b>Color</b>	colorless
<b>Odor</b>	No information available
<b>pH</b>	7.5
<b>Solubility</b>	No information available
<b>Melting point/range</b>	No information available
<b>Boiling Point/Range</b>	No information available
<b>Flash point</b>	Not flammable.
<b>Autoignition temperature</b>	No information available
<b>Flammability Limits in Air</b>	No information available
<b>Explosive properties</b>	No information available
<b>VOC Content</b>	No information available
<b>Initial Boiling Point</b>	No information available
<b>Evaporation Rate</b>	No information available
<b>Decomposition Temperature °C</b>	No information available

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under normal conditions.
<b>Conditions to Avoid</b>	Strong acids Oxidizing agents
<b>Hazardous Decomposition Products</b>	None under normal use.

## 11. TOXICOLOGICAL INFORMATION

**Caution - substance not yet tested completely**

<b>Carcinogenicity</b>	There are no known carcinogenic chemicals in this product.
<b>Irritation</b>	No data available.
<b>Sensitization</b>	No data available
<b>mutagenic effects</b>	None known.
<b>Reproductive Toxicity</b>	No data available
<b>Developmental Toxicity</b>	No data available.
<b>Target Organ Effects</b>	None known.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

The environmental impact of this product has not been fully investigated.

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

**Mobility** No information available.

### 13. DISPOSAL CONSIDERATIONS

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

### 14. TRANSPORT INFORMATION

**DOT** Not regulated

**MEX** Not regulated

**IATA** Not regulated

### 15. REGULATORY INFORMATION

#### **OSHA Regulatory Status**

While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product

#### **International Inventories**

<b>TSCA</b>	Complies
<b>DSL/NDSL</b>	Complies
<b>EINECS/ELINCS</b>	Complies
<b>ENCS</b>	Complies
<b>IECSC</b>	Complies
<b>KECL</b>	Complies
<b>PICCS</b>	-
<b>AICS</b>	Complies
<b>NZIoC</b>	Complies

#### **U.S. Federal Regulations**

##### **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>	No
<b>Chronic Health Hazard</b>	No
<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).

**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.

**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.

**TSCA**

**U.S. State Regulations**

**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 by state right-to-know regulations.

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Trisodium orthovanadate		X			

**International Regulations**

**Mexico - Grade**

No information available.

**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**WHMIS Hazard Class**

Not Determined

**16. OTHER INFORMATION**

**Revision Date:** 2011-06-08

**Revision Note** No information available.

**Disclaimer**

The information provided on this MSDS 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 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**