1. PRODUCT AND COMPANY IDENTIFICATION

Product Code(s) 9493
Product Name PKC412
Pure substance/preparation Preparation
Identified uses For in vitro Research Use Only (RUO). Not intended for use in humans or animals. Not intended for therapeutic or diagnostic procedures.

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

2. HAZARDS IDENTIFICATION

Potential Health Effects

Acute Toxicity

Eyes May cause irritation.
Skin May cause irritation.
Inhalation May cause irritation to mucous membranes.
Ingestion No known effect based on information supplied.

Chronic Effects

No known effect based on information supplied.

Aggravated Medical Conditions None known.

Environmental hazard See Section 12 for additional Ecological Information.

Emergency Overview

The product contains no substances which at their given concentration, are considered to be hazardous to health.

Appearance crystalline powder
Physical State Solid
Odor No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>4'-N-Benzoyl Staurosprine</td>
<td>N/A</td>
<td>&gt;95</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Eye contact Rinse immediately with plenty of water and seek medical advice.
Skin contact Rinse immediately with plenty of water and seek medical advice.
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: Not flammable.
Suitable Extinguishing Media: Dry chemical, CO, alcohol-resistant foam or water spray.
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.

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazard</th>
<th>Flammability</th>
<th>Stability</th>
<th>Physical and chemical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>

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 °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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>crystalline powder</td>
</tr>
<tr>
<td>Color</td>
<td>White to off-white</td>
</tr>
<tr>
<td>Odor</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Insoluble in water</td>
</tr>
<tr>
<td>Melting point/Range</td>
<td>No information available</td>
</tr>
<tr>
<td>Melting point (°C) VALUE</td>
<td>235-260</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability Limits in Air</td>
<td>No information available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not explosive</td>
</tr>
<tr>
<td>VOC Content</td>
<td>No information available</td>
</tr>
<tr>
<td>Initial Boiling Point</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Insoluble in water</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Insoluble in water</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not explosive</td>
</tr>
<tr>
<td>Decomposition Temperature °C</td>
<td>No information available</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stability</td>
<td>Stable under normal conditions.</td>
</tr>
<tr>
<td>Incompatible products</td>
<td>Acids Bases</td>
</tr>
<tr>
<td>Conditions to Avoid</td>
<td>Protect from light</td>
</tr>
<tr>
<td>Hazardous Decomposition Products</td>
<td>May emit small amounts of toxic fumes under fire conditions.</td>
</tr>
</tbody>
</table>

11. TOXICOLOGICAL INFORMATION

Caution - substance not yet tested completely

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity</td>
<td>May be irritating to skin, eyes, mucous membranes and respiratory system.</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>There are no known carcinogenic chemicals in this product.</td>
</tr>
<tr>
<td>Target Organ Effects</td>
<td>None known.</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
<td>No information available</td>
</tr>
</tbody>
</table>

Cell Signaling Technology, Inc. www.cellsignal.com
Bioaccumulation
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
TSCA -
DSL/NDSL -
EINECS/ELINCS -
ENCS -
IECSC -
KECL -
PICCS -
AICS -
NZIoC -

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
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).
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.

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: 2012-03-20
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