SECTION 1. Identification

**Product identifier**

<table>
<thead>
<tr>
<th>Product No</th>
<th>3106</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product name</td>
<td>PKM1/2 (C5E6) Rabbit mAb</td>
</tr>
</tbody>
</table>

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

**Identified uses**
For research use only.

**Manufacturer, importer, supplier**

<table>
<thead>
<tr>
<th>Manufacturer address</th>
<th>Cell Signaling Technology, Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3 Trask Lane</td>
</tr>
<tr>
<td></td>
<td>Danvers, MA 01923</td>
</tr>
<tr>
<td></td>
<td>United States</td>
</tr>
<tr>
<td></td>
<td>TEL: +1 978 867 2300</td>
</tr>
<tr>
<td></td>
<td>FAX: +1 978 867 2400</td>
</tr>
</tbody>
</table>

| 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)

**GHS Label elements, including precautionary statements**

**Signal Word**
Not classified

**Hazard statement(s)**
None.

**Precautionary Statement(s)**
None.

**Supplementary Hazard Information**

May produce an allergic reaction

Hazards not otherwise classified (HNOC)
Not applicable.

SECTION 3. Composition/information on ingredients
SECTION 4. First-aid measures

Eye contact  Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing. Get medical attention immediately if irritation persists.

Skin contact  Wash skin with soap and water.

Inhalation   IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately if symptoms occur.

Ingestion   Clean mouth with water and afterwards drink plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Advice for emergency responders

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

SECTION 5. Fire-fighting measures

Extinguishing media

Suitable Extinguishing Media   Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media   CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

No information available.

Explosion Data

Sensitivity to Mechanical Impact   None.
Sensitivity to Static Discharge   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

For non-emergency personnel   Avoid contact with skin, eyes and clothing. Use personal protective equipment. For personal protection see section 8.
Other information   No information available.
Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

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

Methods for cleaning up
Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

SECTION 7. Handling and storage

Precautions for safe handling

Wear personal protective equipment. See section 8. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions
Keep containers tightly closed in a dry, cool and well-ventilated place.

Packaging material
No information available.

Incompatible products
Strong oxidizing agents. Strong acids.

SECTION 8. Exposure controls/personal protection

Control parameters

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH REL</th>
</tr>
</thead>
<tbody>
<tr>
<td>glycerol</td>
<td>-</td>
<td>TWA mist, total particulate: 15 mg/m³</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA mist, respirable fraction: 5 mg/m³</td>
<td></td>
</tr>
<tr>
<td>sodium azide</td>
<td>Ceiling: 0.29 mg/m³</td>
<td>Ceiling: 0.11 ppm</td>
<td>Ceiling: 0.1 ppm</td>
</tr>
<tr>
<td></td>
<td>Ceiling: 0.3 mg/m³</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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
If splashes are likely to occur, wear: Tightly fitting safety goggles

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.

SECTION 9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state
Liquid
SECTION 10. Stability and reactivity

Reactivity
No information available.

Chemical stability
Stable under normal conditions.

Possibility of hazardous reactions

<table>
<thead>
<tr>
<th>Hazardous reactions</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>None under normal processing.</td>
<td></td>
</tr>
<tr>
<td>Hazardous polymerization</td>
<td>None under normal processing.</td>
</tr>
</tbody>
</table>

Conditions to Avoid
Extremes of temperature and direct sunlight. Over a period of time, sodium azide may react with copper, lead, brass, or solder in plumbing systems to form an accumulation of the HIGHLY EXPLOSIVE compounds of lead azide & copper azide.

Incompatible Materials
Strong oxidizing agents. Strong acids.

Hazardous Decomposition Products
Nitrogen oxides (NOx).

SECTION 11. Toxicological information
Information on likely routes of exposure

**Inhalation**
Avoid breathing vapors or mists. May cause irritation of respiratory tract.

**Eye contact**
Avoid contact with eyes. May cause slight irritation.

**Skin contact**
Avoid contact with skin.

**Ingestion**
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Information on toxicological effects

This product is for experimental uses only. The product has not been completely analyzed and all of the hazards may not be known. Please use caution while handling this product.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
</tr>
</thead>
<tbody>
<tr>
<td>glycerol</td>
<td>= 12600 mg/kg (Rat)</td>
<td>&gt; 10 g/kg (Rabbit)</td>
<td>&gt; 570 mg/m$^3$ (Rat) 1 h</td>
</tr>
<tr>
<td>sodium azide</td>
<td>= 27 mg/kg (Rat)</td>
<td>= 20 mg/kg (Rabbit) = 50 mg/kg (Rat)</td>
<td></td>
</tr>
<tr>
<td>ATEmix (oral)</td>
<td>&gt;5000 mg/kg (ATE)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATEmix (dermal)</td>
<td>&gt;5000 mg/kg (ATE)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATEmix (inhalation-dust/mist)</td>
<td>&gt;5 mg/l (ATE)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Symptoms**
Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing.

**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.

**STOT - single exposure**
No information available.

**STOT - repeated exposure**
No information available.

**Neurological effects**
No information available.

**Aspiration Hazard**
No information available.

SECTION 12. Ecological information

**Ecotoxicity**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Toxicity to algae</th>
<th>Toxicity to fish</th>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
</tr>
</thead>
<tbody>
<tr>
<td>glycerol</td>
<td>-</td>
<td>LC50 51 - 57 mL/L (Oncorhynchus mykiss) 96 h</td>
<td>EC50 500 mg/L (Daphnia magna) 24 h</td>
</tr>
<tr>
<td>sodium azide</td>
<td>EC50 0.35 mg/L (Pseudokirchneriella subcapitata) 96 h</td>
<td>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</td>
<td>LC100 1 mg/L (Orconectes rusticus) 96 h</td>
</tr>
</tbody>
</table>

**Persistence and degradability**
No information available.

**Bioaccumulation**
No information available.

**Mobility**
No information available.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Octanol-Water Partition Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>glycerol</td>
<td>-1.76</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>TSCA 8(b)</th>
<th>TSCA 12(b)</th>
<th>DSL</th>
<th>NDSL</th>
</tr>
</thead>
<tbody>
<tr>
<td>glycerol</td>
<td>Listed</td>
<td>Not Listed</td>
<td>Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>sodium azide</td>
<td>Listed</td>
<td>Not Listed</td>
<td>Listed</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

Canadian Workplace Hazardous Materials Information System (WHMIS) Classification

This product does not meet the criteria for classification under the Hazardous Products Act.

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.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium azide</td>
<td>26628-22-8</td>
<td>1.0</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>Extremely Hazardous Substances RQs</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium azide</td>
<td>1000 lb</td>
<td>1000 lb</td>
</tr>
</tbody>
</table>

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations
### U.S. FIFRA Label Information

This product does not contain any substances regulated as pesticides.

### US Commerce Department - Export Administration Regulations Information

This product does not contain any substances regulated under the Chemical Weapons Convention (CWC).

### U.S. Drug Enforcement Administration Information

This product does not contain any substances regulated under the DEA.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>glycerol</td>
<td>Listed</td>
<td>Listed</td>
<td>Listed</td>
</tr>
<tr>
<td>sodium azide</td>
<td>Listed</td>
<td>Listed</td>
<td>Listed</td>
</tr>
</tbody>
</table>

### SECTION 16. Other information

**Issuing Date:** 2017-07-10

**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