SAFETY DATA SHEET

Recombinant Human RASGRP1 protein, His-tagged

For research use only

1. Identification of the Substance/preparation and of the company/undertaking

(1) Identification of the Product: E.coli (RASGRP1-2922H)

(2) Manufacture/Supplier Identification:

Creative Biomart

45-1 Ramsey Road Shirley, NY 11967, USA

Tel: 1-631-559-9269 Fax: 1-631-938-8127

E-mail: info@creative-biomart.com Website: www.creativebiomart.net

(3) Relevant identified uses of the substance or mixture and uses advised against

Identified uses: For research use only, not for human or veterinary use.

(4) Emergency telephone number

Emergency Phone #: +1-800-424-9300 (CHEMTREC Within USA and Canada)

+1-703-527-3887 (CHEMTREC Outside USA and Canada)

2. Hazards Identification

Physical/chemical hazards :n/a

Human health hazards: Not specific hazard

3. Composition / Information on Ingredients

Substance: recombinant protein was purified from E.coli.

Formulation: The purified protein was Lyophilized from sterile PBS (58mM Na2HPO4,17mM NaH2PO4, 68mM NaCl, pH7.4). 5 % trehalose and 5 % mannitol are added as protectant before lyophilization. The elution buffer contain 300mM imidazole.

4. First Aid Measures

(1) Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

(2) Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an Unconscious person. If large quantities of this material are swallowed, call a physician

immediately. Loosentight clothing such as a collar, tie, belt or waistband.

(3) Skin contact: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

(4) Eye contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

(5) Aggravating conditions : Repeated of prolonged exposure is not known to aggravated medical condition.

5. First Aid Measures

(1) Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

(2) Special hazards arising from the substance or mixture
no data available

(3) Fire Fighting Instructions
Wear self-contained breathing apparatus for fire fighting if necessary, and full protective gear to prevent contact with skin and eyes.

6. Accidental Release Measures

(1) Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. As conditions warrant, wear a NOISH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

(2) Environmental precautions
Do not let product enter drains. Take steps to avoid release into the environment, if safe to do so.

(3) Methods and materials for containment and cleaning up
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal in accordance with local regulations.

7. Handling and Storage

(1) Precautions for safe handling: This material is believed to be non-hazardous. Avoid inhalation, and contact with eyes, skin and clothing. Avoid repeated or prolonged exposure. Wear protective clothing.

(2) Conditions for safe storage, including any incompatibilities
Keep container tightly closed. Store in accordance with information listed on the product insert.

8. Exposure Controls / Personal Protection

Eye protection: Wear goggles or safety glasses.

Hand protection: Wear latex or vinyl gloves.
Respiratory protection: Required when vapors/aerosols are generated.
Ventilation: Use in well-ventilated laboratory.
Other protective equipment: Use lab coat or apron to prevent contact with eyes, skin and clothing.

9. Physical and Chemical Properties

(1) Information on basic physical and chemical properties
Odour: no data available
Odour Threshold: no data available
Melting point/freezing point: no data available
Initial boiling point and boiling range: no data available
Flash point: no data available
Evaporation rate: no data available
Flammability (solid, gas): no data available
Upper/lower flammability or explosive limits: no data available
Vapour pressure: no data available
Vapour density: no data available
Relative density: no data available
Water solubility: Soluble upon reconstitution
Auto-ignition temperature: no data available
Decomposition temperature: no data available
Viscosity: no data available
Explosive properties: no data available
Oxidizing properties: no data available

(2) Other safety information
no data available

10. Stability and Reactivity

(1) Reactivity: no data available

(2) Chemical stability: The product is stable under recommended storage conditions.

(3) Conditions to avoid: Not available.

(4) Incompatible materials: no data available

(5) Hazardous decomposition products
Other decomposition products - no data available
Hazardous decomposition products: CO2, CO, oxides of nitrogen.

11. Toxicological Information

Quantitative data on the toxicity of this product is not available. No toxic effects are to be expected when the product is handled appropriately.

12. Ecological Information

(1) Toxicity: no data available

(2) Persistence and degradability: no data available

(3) Bioaccumulative potential: no data available

(4) Mobility in soil: no data available

(5) Results of PBT and vPvB assessment: no data available

(6) Other adverse effects: no data available

13. Disposal Considerations

Contact professional waste disposal companies for proposal disposal.

14. Transport Information

Not subject to transport regulations.
DOT (US) Not dangerous goods
IMDG Not dangerous goods
IATA Not dangerous goods

15. Physical and Chemical Properties

This product is not a hazardous material.
SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard

16. Other Information

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.