## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1 Product Identifiers

**Product Name: LRRC9 Recombinant Protein Antigen**

**Catalog Number: NBP2-34177PEP**

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified Uses: For research use only.

### 1.3 Details of the supplier of the safety data sheet

| | | | |
|---|---|---|---|
| Company: | Novus Biologicals a Bio-Techne Brand | Telephone: | 1-888-506- |
| | 10771 E Easter Ave | Fax: | 1-303-730-1966 |
| | Centennial, CO 80112 USA | Internet: | www.novusbio.com |
| | | Email address: | novus@novusbio.com |
| Canada: | 461 North Service Rd West | Telephone: | 1-855-668-8722 |
| | Unit B37 | Fax: | 902-827-6402 |
| | Oakville, ON L6M 2V5 | Email address: | Canada.inquiries@bio-techne.com |
| United Kingdom: | 19 Barton Lane | Telephone: | 44 (0)1235 529449 |
| | Abingdon Science Park | Fax: | 44 (0)1235 533420 |
| | Abingdon, OX14 3NB | Email address: | info.emea@bio-techne.com |

### 1.4 Emergency Telephone Number

Emergency Tel: US: 303-730-1950 or 888-506-6887 / Europe: +44(0)1235-529449

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

Classification according to the Regulation (EC) No 1272/2008 Not Classified

### 2.2 Label Elements

Labelling according to Regulation (EC) No 1272/2008 Not Regulated

### 2.3 Other Hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Not applicable.

### 3.2 Mixtures

This product does not contain hazardous chemicals at concentrations of 1% or greater. This product is not known to contain carcinogens at concentrations of 0.1% or greater.

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

**General Advice**

Consult a doctor and show this safety data sheet.

**If Inhaled**

Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.

**In Case of Skin Contact**

Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.

**In Case of Eye Contact**

Flush with copious amounts of water for at least 15 minutes. Consult a doctor.

**If Swallowed**

Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

### 4.2 Most important symptoms and effects, both acute and delayed

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

### 4.3 Indication of immediate medical attention and special treatment needed

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

## 5. FIRE-FIGHTING MEASURES

**5.1 Extinguishing Media**

**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**5.2 Special hazards arising from the substance or mixture**

Carbon oxides, Nitrogen oxides (NOx)

**5.3 Precautions for fire-fighters**

Wear self-contained breathing apparatus for firefighting if necessary

## 6. ACCIDENTIAL RELEASE MEASURES

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

Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas.

**6.2 Environmental precautions**

Do not let product enter drains.

**6.3 Methods and materials for containment and cleaning up**

Cover spillage with suitable absorbent material. Hold all material for appropriate disposal as described under section 13 of SDS.

**6.4 Reference to other sections**

For required PPE see section 8. For disposal see section 13.

## 7. HANDLING AND STORAGE

**7.1 Precautions for safe handling**

Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

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

Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use.

**7.3 Specific end uses**

Not applicable.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1 Control parameters**

**Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

**8.2 Exposure controls**

**Appropriate Engineering Controls**

Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.

**Personal Protective Equipment**

**Eye / Face Protection**

Use appropriate safety glasses.

**Skin Protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves must satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it. **Body Protection**

Wear appropriate protective clothing.

**Respiratory Protection**

For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**9.1 Information on basic physical and chemical properties**

| | | | |
|---|---|---|---|
| **Appearance** | clear liquid | **Vapor Pressure** | No data available. |
| **Odor** | Little to none | **Vapor Density** | No data available. |
| **Odor Threshold** | No data available. | **Relative Density** | No data available. |
| **pH** | No data available. | **Solubility(ies)** | No data available. |
| **Melting / Freezing Point** | No data available. | **Partition Coefficient** | No data available. |
| **Boiling Point / Range** | No data available. | **Autoignition Temperature** | No data available. |
| **Flash Point** | No data available. | **Decomposition Temperature** | No data available. |
| **Evaporation Rate** | No data available. | **Viscosity** | No data available. |
| **Flammability (Solid, Gas)** | No data available. | **Explosive Properties** | No data available. |
| **Upper / Lower Flammability or Explosive Limits** | No data available. | **Oxidizing Properties** | No data available. |

**9.2 Other safety information**

No data available.

## 10. STABILITY AND REACTIVITY

**10.1 Reactivity**

No data available.

**10.2 Chemical stability**

No data available.

**10.3 Possibility of hazardous reactions**

No data available.

**10.4 Conditions to avoid**

No data available.

**10.5 Incompatible materials**

Strong oxidizing agents.

**10.6 Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx). In the event of fire: see section 5

## 11. TOXICOLOGICAL INFORMATION

**11.1 Information on toxicological effects**

**Acute Toxicity**

| Chamical Name | LD50 (oral, rat/mouse) | LD50 (dermal, rat/rabbit) | LD50 (inhalation, rat) |
|---|---|---|---|
| Urea | 8.471 mg/kg (Rat) | >2000 mg/kg (Rat) | 4h, > 0,83mg/l (Rat) |
| Disodium hydrogenorthophosphate | > 2000mg/kg (Rat) | >2000 mg/kg (Rat) | 4h, > 0,83mg/l (Rat) |
| Sodium chloride | > 2000mg/kg (Rat) | >10000 mg/kg (Kanin) | 1h, > 42 mg/l (Rat) |

**Skin Corrosion / Irritation**

Classified based on available data

**Serious Eye Damage / Irritation**

Classified based on available data

**Respiratory or Skin Sensitization**

Classified based on available data

**Germ Cell Mutagenicity**

Classified based on available data

**Carcinogenicity**

Classified based on available data

**Reproductive Toxicity**

Classified based on available data

**Specific Target Organ Toxicity - Single Exposure**

Classified based on available data

**Specific Target Organ Toxicity - Repeated Exposure**

Classified based on available data

**Aspiration Hazard**

Classified based on available data

**Symptoms / Routes of Exposure**

| | |
|---|---|
| Inhalation: | There may be irritation of the throat with a feeling of tightness in the chest. |
| Ingestion: | There may be irritation of the throat. |
| Skin: | There may be mild irritation at the site of contact. |
| Eyes: | There may be irritation and redness. |
| Delayed / Immediate Effects: | No known symptoms. |

**Additional Information**

Classified based on available data

## 12. ECOLOGICAL INFORMATION

**12.1 Toxicity**

**Toxicity to fish flow-through test LC50 - Lepomis macrochirus (Bluegill) - 5.840 mg/l - 96 h (Sodium chloride) Remarks: (ECHA) No data available semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 100 mg/l - 96 h (Disodium hydrogenorthophosphate) (OECD Test Guideline 203) semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 100 mg/l - 96 h (Urea) (OECD Test Guideline 203)**

**Toxicity to daphnia and other aquatic invertebrates static test LC50 - Daphnia magna (Water flea) - 4.136 mg/l - 48 h (Sodium chloride) (OECD Test Guideline 202) static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (Disodium hydrogenorthophosphate) (OECD Test Guideline 202) static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (Urea) (OECD Test Guideline 202)**

**Toxicity to algae static test EC50 - Nitzschia sp. - 2.430 mg/l - 120 h (Sodium chloride) (OECD Test Guideline 201) static test ErC50 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h (Disodium hydrogenorthophosphate) (OECD Test Guideline 201) static test ErC50 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 48 h (Urea) (OECD Test Guideline 201)**

**Toxicity to bacteria static test EC50 - activated sludge - > 1.000 mg/l - 3 h (Disodium hydrogenorthophosphate) (OECD Test Guideline 209) static test EC50 - activated sludge - > 1.000 mg/l - 3 h (Urea) (OECD Test Guideline 209)**

### 12.2 Persistence and degradability

No data available.

### 12.3 Bioaccumulative potential

No data available.

### 12.4 Mobility in soil

No data available.

**12.5 Results of PBT and vPvB assessment**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**12.6 Other adverse effects**

No data available Discharge into the environment must be avoided. Discharge into the environment must be avoided. No data available Discharge into the environment must be avoided. Depending on the concentration, phosphates may contribute to the eutrophication of water supplies. Discharge into the environment must be avoided.

## 13. DISPOSAL CONSIDERATIONS

**13.1 Waste treatment methods**

**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated Packaging**

Dispose of in a regulated landfill site or other method for hazardous or toxic wastes in accordance with national, regional, or local legislation.

## 14. TRANSPORT INFORMATION

Not regulated for Land Transport (ADR/RID), for Sea Transport (IMDG) or for Air Transport (IATA).

**14.1 UN-Number**

Does not meet the criteria for classification as hazardous for transport.

**14.2 UN proper shipping name**

Does not meet the criteria for classification as hazardous for transport.

**14.3 Transport hazard class(es)**

Does not meet the criteria for classification as hazardous for transport.

**14.4 Packaging group**

Does not meet the criteria for classification as hazardous for transport.

**14.5 Environmental hazards**

Does not meet the criteria for classification as hazardous for transport.

**14.6 Special precautions for users**

Does not meet the criteria for classification as hazardous for transport.

**Additional Transport Information**

Does not meet the criteria for classification as hazardous for transport.

## 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

**TSCA (Toxic Substances Control Act) :** Not applicable.

**SARA 313 :** Not applicable.

**SARA 311/312 :** Not applicable.

**CERCLA Reportable Quantity :** Not applicable.

**California Proposition 65 :** Not applicable.

**15.2 Chemical safety assessment**

A Chemical Safety Assessment has not been made for this product.

## 16. OTHER INFORMATION

**Further Information**

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This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislature. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.

End of safety data sheet