

| 1.  | IDENTIFICATION OF  | THE SUBSTANCE/MIXTURE AND                          | OF THE COMF     | PANY/UNDERTAKING       | i                               |         |  |  |  |
|-----|--|--|-----------------|------------------------|---------------------------------|---------|--|--|--|
| 1.1 | Product Identifiers  |  |                 |                        |                                 |         |  |  |  |
|     | Product Name:<br>Catalog Number:   | Thioredoxin-1 Antibody (116) [All<br>NBP2-89458APC | ophycocyanin]   |                        |                                 |         |  |  |  |
| 1.2 | Relevant identified use  | es of the substance or mixture and u               | ses advised ag  | ainst                  |                                 |         |  |  |  |
|     | Identified Uses:   | For Research Use Only                              |                 |                        |                                 |         |  |  |  |
| 1.3 | Details of the supplier of the safety data sheet   |  |                 |                        |                                 |         |  |  |  |
|     | Company: Novus Biologicals a Bio-Techne Brand  |  | Brand T         | elephone:              | 1-888-506-6887                  |         |  |  |  |
|     |  | 10730 E. Briarwood Avenue, Building IV             |                 | ax:                    | 1-303-730-1966                  |         |  |  |  |
|     |  | Centennial, CO 80112, USA                          |                 | nternet:               | www.novusbio.com                |         |  |  |  |
|     |  |  | E               | Email address:         | novus@novusbio.com              |         |  |  |  |
|     | Canada:  | 21 Canmotor Ave                                    | т               | elephone:              | 1-855-668-8722                  |         |  |  |  |
|     |  | Toronto, ON M8Z 4E6                                |                 | ax:                    | 902-827-6402                    |         |  |  |  |
|     |  |  | E               | Email address:         | Canada.inquiries@bio-techne.com |         |  |  |  |
|     | United Kingdom: 19 Barton Lane   |  | т               | elephone:              | 44 (0)1235 529449               |         |  |  |  |
|     |  | Abingdon Science Park                              | F               | ax:                    | 44 (0)1235 533420               |         |  |  |  |
|     |  | Abingdon, OX14 3NB                                 | E               | Email address:         | info.emea@bio-techne.com        |         |  |  |  |
|     | China:   | 1193 Changning Road                                | т               | elephone:              | 86-400-821-3475                 |         |  |  |  |
|     |  | Unit 1901, Raffles Changning Of                    |                 | ax:                    | 76 (021)52371001                |         |  |  |  |
|     |  | Shanghai , China                                   | E               | Email address:         | techsupport.cn@bio-techne.com   |         |  |  |  |
| 1.4 | Emergency Telephone  | Number   |                 |                        |                                 |         |  |  |  |
|     | Emergency Tel:   | US: 303-730-1950 or 888-506-6                      | 887 / Europe: + | 44(0)1235-529449 / Chi | ina 86-400-821-3475             |         |  |  |  |
| 2.  | HAZARDS IDENTIFIC  | HAZARDS IDENTIFICATION                             |                 |                        |                                 |         |  |  |  |
| 2.1 | Classification of the substance or mixture   |  |                 |                        |                                 |         |  |  |  |
|     | This substance does not meet the classification criteria of the EC Directives 67/548/EEC, 1999/45/EC, 1272/2008 [CLP], GHS or 29 CFR 1910.1200 [OSHA].   |  |                 |                        |                                 |         |  |  |  |
| 2.2 | Label Elements   |  |                 |                        |                                 |         |  |  |  |
|     | The product does not need to be labelled in accordance with EC directives or respective national laws.   |  |                 |                        |                                 |         |  |  |  |
| 2.3 | Other Hazards - None   | Hazards - None                                     |                 |                        |                                 |         |  |  |  |
| 3.  | COMPOSITION/INFO   | RMATION ON INGREDIENTS                             |                 |                        |                                 |         |  |  |  |
| 3.1 | Substances   |  |                 |                        |                                 |         |  |  |  |
|     | Not applicable.  |  |                 |                        |                                 |         |  |  |  |
| 3.2 | Mixtures   |  |                 |                        |                                 |         |  |  |  |
|     | Component  | CAS No.  | EC No.          | Index No.              | Classification                  | Conc.   |  |  |  |
|     | Sodium Azide < 0.1%  |  | 247-852-1       | 011-004-00-            |                                 | < 0.1 % |  |  |  |
| 4.  | FIRST AID MEASURE  |  |                 |                        |                                 |         |  |  |  |
| 4.1 |  |  |                 |                        |                                 |         |  |  |  |
| 4.1 | Description of first aid measures  |  |                 |                        |                                 |         |  |  |  |
|     | General Advice<br>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<br>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<br>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

In combustion, may emit toxic fumes.

### 5.3 Precautions for fire-fighters

Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.

### 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**

Use appropriate chemical resistant gloves (minimum requirement use standard BS EN 374:2003). Gloves should be inspected before use. Wash and dry hands thoroughly after handling.

# **Body Protection**

Wear appropriate protective clothing.

#### **Respiratory Protection**

If risk assessment indicates necessary, use a suitable respirator.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

## 9.1 Information on basic physical and chemical properties

| Appearance               | Lyophilized white powder or 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<br>Evaporation Rate   |                                   | No data available.<br>No data available. | Decomposition Temperature<br>Viscosity | No data available.<br>No data available. |  |  |  |  |
|---------------------------------------|---|-----------------------------------|--|--|--|--|--|--|--|
|                                       | Flammability (Solid, Gas)   |                                   | No data available.                       | Explosive Properties                   | No data available.                       |  |  |  |  |
|                                       | Upper / Lower Flammabilit<br>Limits   | y or Explosive                    | No data available.                       | Oxidizing Properties                   | No data available.                       |  |  |  |  |
| 9.2                                   | Other safety information  |                                   |  |  |  |  |  |  |  |
|                                       | No data available.  |                                   |  |  |  |  |  |  |  |
| 10.                                   | STABILITY AND REACTIVITY  |                                   |  |  |  |  |  |  |  |
| 10.1                                  | Reactivity  |                                   |  |  |  |  |  |  |  |
|                                       | Stable under recommended transport or storage conditions.   |                                   |  |  |  |  |  |  |  |
| 10.2                                  | Chemical stability  |                                   |  |  |  |  |  |  |  |
|                                       | Stable under recommended storage conditions.  |                                   |  |  |  |  |  |  |  |
| 10.3                                  | Possibility of hazardous reactions  |                                   |  |  |  |  |  |  |  |
|                                       | Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below. |                                   |  |  |  |  |  |  |  |
| 10.4                                  | Conditions to avoid   |                                   |  |  |  |  |  |  |  |
|                                       | Heat, moisture.   |                                   |  |  |  |  |  |  |  |
| 10.5                                  | Incompatible materials  |                                   |  |  |  |  |  |  |  |
|                                       | Strong acids/alkalis, strong oxidising/reducing agents.   |                                   |  |  |  |  |  |  |  |
| 10.6 Hazardous decomposition products |   |                                   |  |  |  |  |  |  |  |
|                                       | Strong acids/alkalis, strong  | oxidising/reduc                   | ng agents.                               |  |  |  |  |  |  |
| 11.                                   | TOXICOLOGICAL INFOR   | MATION                            |  |  |  |  |  |  |  |
| 11.1                                  | Information on toxicologic  | al effects                        |  |  |  |  |  |  |  |
|                                       | Acute Toxicity  |                                   |  |  |  |  |  |  |  |
|                                       | Classified based on availab   | ole data                          |  |  |  |  |  |  |  |
|                                       | Skin Corrosion / Irritation   |                                   |  |  |  |  |  |  |  |
|                                       | Classified based on availab   | ole data                          |  |  |  |  |  |  |  |
|                                       | Serious Eye Damage / Irrita   | ation                             |  |  |  |  |  |  |  |
|                                       | Classified based on availab   | ole data                          |  |  |  |  |  |  |  |
|                                       | Respiratory or Skin Sensit  | 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 availab   | ole data                          |  |  |  |  |  |  |  |
|                                       | Specific Target Organ Toxi  | city - Single Exp                 | osure                                    |  |  |  |  |  |  |
|                                       | 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 m                    | ild irritation at the site of contac     | t.                                     |  |  |  |  |  |
|                                       | Eyes:   | There may be ir                   | itation and redness.                     |  |  |  |  |  |  |
|                                       | Delayed / Immediate<br>Effects:   | No known symp                     | toms.                                    |  |  |  |  |  |  |
|                                       | Additional Information  |                                   |  |  |  |  |  |  |  |
|                                       | Classified based on available data  |                                   |  |  |  |  |  |  |  |

# 12. ECOLOGICAL INFORMATION

# 12.1 Toxicity

No data available.

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

No data available

### 12.6 Other adverse effects

No data available

# 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

### Product

Transfer to a suitable container and arrange for collection by specialized disposal company in accordance with national, regional, or local legislation.

### **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

Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID, DOT and 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. 453/2010.

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

TSCA (Toxic Substances Control Act): Listed SARA 313: Listed SARA 311/312: Listed CERCLA Reportable Quantity: 1000 lbs. 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