

Safety Data Sheet (SDS)

Glycerol

I. Product And Company Identification:

Product name: NBP1-32822

CAS number: None

Manufacturer Supplier:

Novus Biologicals, LLC
10771 E Easter Ave
Centennial, CO
80112, USA
Telephone: 1-888-506-6887
Fax: 303-730-1966

II. Hazard Identification:

Classification of The Substance Or Mixture: Glycerol (CAS# 56-81-5) is not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008. This substance is not classified as dangerous according to Directive 67/548/EEC.

Label Elements: The product does not need to be labelled in accordance with EC directives or respective national laws.

Other hazards: none

Pictogram: none

III. Composition/Information on Ingredients:

This product is composed of antibodies in aqueous buffer solution. According to 29 CFR

1910.1200(d), hazardous ingredients at less than <1% and carcinogens at less than < 0.1%

are considered non-hazardous. Any hazardous or carcinogenic ingredients exceeding these criteria are listed below.

This product may contain the following hazardous ingredients.

Ingredient	CAS#	Percent
Glycerol	56-81-5	< 30%

IV. First Aid Measures:

Inhalation: If inhaled, remove to fresh air. If breathing is difficult, get medical attention.

Ingestion: If swallowed and person is conscious, rinse out mouth with water. Get medical attention.

Skin Exposure: In case of contact, wash skin with soap and water.

Eye Exposure: In case of contact with eyes, immediately flush eyes water for at least 15 minutes.

Get medical attention.

V. Fire Fighting Measures:

Flash Point: Data not available.

Autoignition Temperature: Data not available.

Fire Extinguishing Media: Water spray, dry chemical, foam, or carbon dioxide.

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

VI. Accidental Release Measures:

Absorb liquid with an absorbent material. Transfer contaminated absorbent to a chemical waste container for disposal.

VII. Handling And Storage:

Precautions For Safe Handling: Avoid inhalation and contact with eyes and skin. Avoid prolonged or repeated exposure.

Conditions For Safe Storage: Store at -20°C in tightly closed container.

VIII. Exposure Controls/Personal:

Workplace Controls: Maintain adequate ventilation, eye wash and quick-drench facilities in work area.

Personal Protective Equipment:

Respiratory Protection: Respirator

Hand Protection: Chemical resistant gloves and chemical safety glasses

Eye Protection: Goggles or face shield

Skin And Body Protection: Lab coat

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IX. Physical And Chemical Properties:

Physical State: Colorless liquid.

Odor: Odorless.

Boiling Point: Data not available.

Melting Point: Data not available.

Volatile Organic Compound: Data not available.

Solubility in water: Readily miscible in water.

X. Stability and Reactivity:

Stability: Stable.

Hazardous Decomposition: May form carbon dioxide and carbon monoxide.

Conditions to avoid: Strong oxidizing agents

XI. Toxicological Information:

Acute Toxicity:

LD50 Oral - rat - 12.600 mg/kg

LD50 Dermal - rabbit - > 10.000 mg/kg

Skin Corrosion/Irritation:

Skin - rabbit

Result: Mild skin irritation - 24 h

Serious Eye Damage/Eye Irritation:

Eyes - rabbit

Result: Mild eye irritation - 24 h

May be toxic if absorbed through skin or ingested.

Additional Information:

RTECS: MA8050000

Prolonged or repeated exposure may cause:, Nausea, Headache, Vomiting

XII. Ecological Information:

Data not available.

XIII. Disposal Considerations:

Dispose of in accordance with federal, state and local

environmental regulations.

XIV. Transport Information:

D.O.T.: This substance is considered non-hazardous for transport.

IATA: This substance is considered non-hazardous for air transport.

XV. Regulatory Information:

EU Regulation/Classification/Labeling Information: Not available for this product.

Chemical Inventory Status:

SARA Listed Component: None.

TSCA Listed Component: None.

Canada (WHMIS): DSL No, NDSL No.

XVI. Other Information:

This compound is sold only for research use by personnel familiar with chemicals and who are well trained in good laboratory habits, such as avoiding spills, keeping hands clean at all times and not rubbing eyes with hands while working in the laboratory.

This solution is sold only in microliter quantities for use in life sciences research. No other use is intended, and any other use may involve substantive hazards.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide for experienced personnel. Novus Biologicals shall not be held liable for any damage resulting from the handling of or from contact with the above product. The burden of safe use of this material rests entirely with the user.

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If inhaled:

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact:

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact:

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed:

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section II) and/or in section XI

Indication of any immediate medical attention and special treatment needed no data available

V. Fire Fighting Measures:

Description of first aid

Extinguishing media

Suitable extinguishing media

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

Special hazards arising from the substance or mixture

Oxides of phosphorus, Hydrogen chloride gas, Potassium oxides, Sodium oxides

Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

Further information

No data available

II. Hazard Identification:

Classification of the substance or mixture

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008

Label elements

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008

Pictogram:

none

III. Composition/Information on Ingredients:

This product is composed of antibodies in aqueous buffer solution.

This product may contain the following ingredients.

Ingredient	CAS#	Percent
Sodium chloride	7647-14-5	0.8%
Sodium phosphate dibasic	7558-79-4	0.178%
Dihydrogen potassium phosphate	7778-77-0	0.023%
Potassium chloride	7447-40-7	0.02%

IV. First Aid Measures:

Description of first aid measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance.

VI. Accidental Release Measures:

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

For personal protection see section VIII.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Reference to other sections

For disposal see section XIII

VII. Handling And Storage:

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Specific end use(s)

Apart from the uses mentioned in section I no other specific uses are stipulated

VIII. Exposure Controls/Personal:

Control parameters

Components with workplace control parameters

Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166(EU).

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 have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

IX. Physical And Chemical Properties:

Information on basic physical and chemical properties

- a) Appearance Form: solid
- b) Odour: no data available
- c) Odour Threshold: no data available
- d) pH: 7,2 - 7,6 at 25 °C
- e) Melting point/freezing point: No data available
- f) Initial boiling point and boiling range: No data available
- g) Flash point: Not applicable
- h) Evaporation rate: no data available
- i) Flammability (solid, gas): no data available

j) Upper/lower flammability or explosive limits: no data available
k) Vapour pressure: no data available
l) Vapour density: no data available
m) Relative density: 1.03 g/cm³
n) Water solubility: soluble
o) Partition coefficient n-octanol/water: no data available
p) Auto-ignition temperature: no data available
q) Decomposition temperature: no data available
r) Viscosity: no data available
s) Explosive properties: no data available
t) Oxidizing properties: no data available
Other safety information: no data available

X. Stability and Reactivity:

Reactivity: no data available

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: no data available

Conditions to avoid: no data available

Incompatible materials: Strong oxidizing agents, Strong acids

Hazardous decomposition products:

Other decomposition products - no data available

In the event of fire: see section V

XI: Toxicological Information:

Information on toxicological effects

Acute toxicity: no data available

Skin corrosion/irritation: No data available

Respiratory or skin sensitisation: No data available

Serious eye damage/eye irritation: No data available

Respiratory or skin sensitization: No data available

Germ cell mutagenicity: no data available

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity: no data available

Specific target organ toxicity - single exposure: no data available

Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available

Additional Information

RTECS: Not available

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

XII: Ecological Information:

Toxicity: no data available

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

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.

Other adverse effects:

No data available

XIII: Disposal Considerations:

Waste treatment methods

Product: Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber

Contaminated packaging: Dispose of as unused product.

XIV: Transport Information:

UN number:

ADR/RID: - IMDG: - IATA: -

UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

Transport hazard class (es):

ADR/RID: - IMDG: - IATA: -

Packaging group:

ADR/RID: - IMDG: - IATA: -

Environmental hazards:

ADR/RID: no IMDG Marine pollutant: no IATA: no

Special precautions for user: no data available

XV. Regulatory Information:

This safety datasheet complies with the requirements of
Regulation (EC) No. 453/2010.

Safety, health and environmental regulations/legislation specific
for the substance or mixture: no data available

Chemical Safety Assessment: For this product a chemical safety
assessment was not carried out

XVI. Other Information:

This compound is sold only for research use by personnel familiar with
chemicals and who are well trained in good laboratory habits, such as
avoiding spills, keeping hands clean at all times and not rubbing eyes with
hands while working in the laboratory.

This solution is sold only in microliter quantities for use in life sciences
research. No other use is intended, and any other use may involve
substantive hazards.

The above information is believed to be correct but does not purport to
be all inclusive and shall be used only as a guide for experienced
personnel. Novus Biologicals shall not be held liable for any damage
resulting from the handling of or from contact with the above product.

The burden of safe use of this material rests entirely with the user.

Safety Data Sheet (SDS)

Proclin

Other Hazards

This mixture does not contain any substances that are assessed to be a PBT or a vPvB

III. Composition/Information on Ingredients

Component	Classification
Proclin Included in List of harmonised classification and labelling of hazardous substances of REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008	
CAS No. 55965-84-9	Skin Corr. 1B; H314: $C \geq 0,6 \%$ Skin Irrit. 2; H315: $0,06 \% \leq C < 0,6 \%$ Eye Irrit. 2; H319: $0,06 \% \leq C < 0,6 \%$ Skin Sens. 1; H317: $C \geq 0,0015 \%$

IV. First Aid Measures

Description of first aid measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance.

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin contact: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

Eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Swallowed: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed

H317 - May cause an allergic skin reaction

The most important known symptoms and effects are described in the labelling (see section II) and/or in section XI

Indication of any immediate medical attention and special treatment needed no data available

V. Fire Fighting Measures

Extinguishing media

Suitable extinguishing media: Water spray. Carbon dioxide (CO₂). Foam.

Dry chemical.

Unsuitable extinguishing media: No information available.

II. Hazard Identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

Physical hazards: Not classified

Health hazards:

-Skin corrosion: Category 1B

-Skin irritation: Category 2

-Skin sensitization: Category 1

-Eye irritation: Category 2

Environmental Hazards: Not Hazardous

Additional information: No information available

Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]

Hazard Pictogram



Signal word: Warning

Hazard statement(s)

H317 - May cause an allergic skin reaction.

Precautionary statement(s)

Prevention: Not applicable

Response: Not applicable

Storage: Not applicable

Disposal: Not applicable

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Special hazards arising from the substance or mixture

Not known.

Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

VI. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

For personal protection see section VIII.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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.

Reference to other sections

For disposal see section XIII

VII. Handling and Storage

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Specific end use(s)

Use as laboratory reagent. Scientific research and development

VIII. Exposure Controls/Personal protection

Control parameters

Component: Mixture of 5-chloro-2-methylisothiazol-3(2H)-one and 2-methylisothiazol-3(2H)-one

EU OEL (TWA): None

EU OEL (STEL): None

EU Skin Notation: None

Engineering measures: Ensure adequate ventilation, especially in

confined areas.

Exposure controls

Personal protective equipment

Eye/face protection: Tightly fitting safety goggles.

Skin and body protection: Wear laboratory coat for body protection.

Hand protection: Glove material: Nitrile rubber. with thickness (mm): 5.

Break through time. (hours): 1. Recommended glove type has not been tested for use with this product. Information is based on professional knowledge.

Respiratory protection: In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls: Avoid discharge into drains and waterways whenever possible.

IX. Physical And Chemical Properties

Information on basic physical and chemical properties

- a) Appearance Form: colorless liquid
- b) Odour: No strong odour known
- c) Odour Threshold: no data available
- d) Melting point/freezing point: no data available
- e) Boiling point and boiling range : no data available
- f) Flash point: no data available
- g) Auto-ignition temperature: no data available
- h) Decomposition temperature: no data available
- i) Evaporation rate: no data available
- j) Flammability (solid, gas): no data available
- k) Upper/lower flammability or explosive limits: no data available
- l) Vapour pressure: no data available
- m) Relative density: no data available
- n) Water solubility: soluble
- o) Partition coefficient n-octanol/water: no data available
- p) Viscosity: no data available

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q) Explosive properties: no data available

r) Oxidizing properties: no data available

Other safety information

no data available

X. Stability and Reactivity

Reactivity

no data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Hazardous reaction has not been reported.

Conditions to avoid

no data available

Incompatible materials

No dangerous reaction known under conditions of normal use.

Hazardous decomposition products:

No known hazardous decomposition products. In the event of fire: see section V

XI. Toxicological Information

Information on toxicological effects

LD50 Dermal - rat/rabbit - no data available

LD50 Oral – rat – 53 mg/kg

LC50 Inhalation – rat – 1.23 mg/L

Principal Routes of Exposure, Potential health effects

Irritation: Conclusive but not sufficient for classification

Corrosivity: Conclusive but not sufficient for classification

Sensitisation: May cause sensitisation by skin contact

STOT - Single Exposure: Conclusive but not sufficient for classification

STOT - Repeated Exposure: Conclusive but not sufficient for classification

Carcinogenicity: Conclusive but not sufficient for classification

Mutagenicity: Conclusive but not sufficient for classification

Reproductive toxicity: Conclusive but not sufficient for classification

Aspiration Hazard: Conclusive but not sufficient for classification

XII. Ecological Information

Toxicity

No information available.

Persistence and degradability

No information available.

Bioaccumulative potential

No information available.

Mobility in soil

No information available.

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other adverse effects

No information available.

XIII. Disposal Considerations

Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues.

This material and its container must be disposed of in accordance with approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.

XIV. Transport Information

IATA / ADR / DOT-US / IMDG

Not regulated in the meaning of transport regulations

UN number

Not applicable

UN proper shipping name

Not applicable

Transport hazard class (es):

Not applicable

Packaging group:

Not applicable

Environmental hazards:

Not applicable

Special precautions for user

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Not applicable

contact with the above product. The burden of safe use of this material rests entirely with the user.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

XV. Regulatory Information

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

None

Substances of Very High Concern

None

Restricted substances under EC 1907/2006, Annex XVII

None

Substances listed under Annex I of Regulation (EC) No 689/2008

None

Restricted substances under Annex V of Regulation (EC) No 689/2008

None

Substances under Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC

None

XVI. Other Information

This compound is sold only for research use by personnel familiar with chemicals and who are well trained in good laboratory habits, such as avoiding spills, keeping hands clean at all times and not rubbing eyes with hands while working in the laboratory.

This solution is sold only in microliter quantities for use in life sciences research. No other use is intended, and any other use may involve substantive hazards.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide for experienced personnel. Novus Biologicals shall not be held liable for any damage resulting from the handling of or from