

Safety Data Sheet

Glycerol

Product Name: Smad4 Recombinant Protein

Reviewed on: **January 26, 2017**

1. Product Information

- **Other means of identification: Catalog Number: NBC1-22616**
- **GHS product identifier: Smad4 Recombinant Protein**
- **Application of the substance / the preparation: For Research Use Only**
- **Manufacturer/Supplier:**
Novus Biologicals, LLC
8100 Southpark Way,
A-8 Littleton, CO 80120
USA
1-888-506-6887
- **Emergency information:** In case of a chemical emergency, spill, fire, or exposure, call Novus Biologicals at (303) 730-1950 or (888)-506-6887. In Europe call +44(0)1235-529449.

2. Hazards Identification:

- **Classification:** Not a hazardous substance or mixture.
- **Label Elements:** Not a hazardous substance or mixture.
- **Hazard Statements:** None

3. Information on Ingredients:

- **Substances: Glycerol (20%)**
- **Synonyms:** 1,2,3-Propanetriol; Glycerin;
- **CAS-No. 56-81-5, EC-No. 200-289-5); Formula: C₃H₈O₃; Molecular Weight 92.09 g/mol**

4. First Aid Measures:

- **General Advice:** Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
- **If swallowed:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
- **Skin contact:** Wash off with soap and plenty of water. Consult a physician.
- **Eye exposure:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
- **If inhaled:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
- **Most important symptoms and effects, both acute and delayed:** The most important known symptoms and effects are described in the labeling (see section 2) and/or in section 11.
- **Indication of any immediate medical attention and special treatment needed:** No data available.

5. Fire Fighting Measures:

- **Conditions of Flammability:** Carbon oxides
- **Extinguishing Media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- **Unusual Fire & Explosion Hazard:** No usual fire or explosion hazards noted.
- **Special Protective Equipment for Firefighters:** Wear self contained breathing apparatus for fire fighting if necessary.

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6. Accidental Release Measures:

- **Person-related safety precautions:** Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.
- **Measures for environmental protection:** Do not allow to enter drains, sewers or watercourses.
- **Measures for containment and cleaning:**
 - Absorb liquid components with liquid-binding material.
 - Pick up mechanically.
 - Dispose contaminated material as waste according to item 13.
- **Additional information:** None.

7. Handling and Storage:

- **Precautions for safe handling:** Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.
- **Information about protection against explosions and fires:** Keep it safely way from heated source.
- **Conditions for safe storage:** Keep container tightly closed in a dry and well-ventilated place. Hygroscopic.

8. Exposure Controls and Personal Protection:

- Contains no substance with occupational exposure limit values
- **Respiratory protection:** Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose 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).
- **Eye protection:** Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(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.
 - If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.
- **Body protection:** Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

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9. Physical and Chemical Properties:

- **Appearance:** Liquid
- **Color:** Colorless
- **Odor:** Odorless
- **pH:** 5.5 - 8
- **Melting point/freezing point:** Melting point/range: 20 °C
- **Boiling point/Boiling range:** 182 °C at 27 hPa
- **Flash point:** 160 °C (320 °F) - closed cup
- **Evaporation rate:** Not available.
- **Flammability:** Not available.
- **Upper/lower flammability or explosive limits:** Lower explosion limit: 0.9 %(V)
- **Vapor pressure/density:** 0.0033 hPa at 50 °C
- **Relative density:** 3.18 - (Air = 1.0)
- **Water solubility:** Soluble
- **Partition coefficient:** noctanol/water: Not available
- **Auto igniting:** Not available
- **Decomposition temperature:** Not available
- **Viscosity:** Not available
- **Explosive properties:** Not available
- **Oxidizing properties:** Not available

10. Stability and Reactivity:

- **Chemical Stability:** Stable under recommended storage and handling temperatures.
- **Possible hazardous reactions:** No data available.
- **Incompatible materials to be avoided:** No data available.
- **Incompatible materials:** Strong bases, Strong oxidizing agents.
- **Hazardous decomposition products:** Other decomposition products - no data available.

11. Toxicological Information:

- **Acute toxicity:** No data available
- **Skin irritant effect:** Rabbit skin (mild skin irritation 24hr)
- **Eye irritant effect:** Rabbit skin (mild eye irritation 24hr)
- **Respiratory or skin sensitization:** No data available.
- **Mutagenicity:** No data available.
- **Carcinogenicity:** Not listed by IARC, ACGIH, NTP, OSHA.
- **Reproductive toxicity:** No data available.
- **Additional toxicological information:**
 - RTECS: MA8050000
 - Prolonged or repeated exposure may cause nausea, headache, and vomiting.
 - Kidney Irregularities based on human evidence.

12. Ecological Information:

- **Toxicity:** Not determined
- **Persistence and Degradability:** No data available
- **Bioaccumulative potential:** No data available
- **Mobility:** No data available
- **PBT and vPvB assessment:** PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
- **Other adverse effects:** No data available

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13. Disposal Considerations:

- **Disposal methods:** Dispose of waste in accordance to applicable national, regional, or local regulations.
- **Contaminated packaging:** Dispose in the same manner as unused product.

14. Transport Information:

- **UN Number:** Does not meet the criteria for classification as hazardous for transport.
- **DOT regulations:** -Hazard class: None
- **Land transport ADR/RID (cross-border):** Not regulated.
- **Maritime transport IMDG:** Not regulated.
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:** Not regulated.
- **Transport/Additional information:** Not dangerous according to the above specifications.

15. Regulations:

- **US Federal and State Regulations**

REACH No. A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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: Chronic Health Hazard

Massachusetts Right To Know Components: Glycerol (CAS_No. 56-81-5)

Pennsylvania Right To Know Components: Glycerol (CAS_No. 56-81-5)

New Jersey Right To Know Components: Glycerol (CAS_No. 56-81-5)

California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. Other Information:

- **HMIS Rating**

Health Hazard:	0
Chronic Health Hazard:	*
Flammability:	1
Physical Hazard:	0

- **NFPA Rating**

Health Hazard:	0
Fire Hazard:	1
Reactivity Hazard:	0