SAFETY DATA SHEET
Date: April 11, 2018

1. PRODUCT AND COMPANY IDENTIFICATION
   
   **Product Name:** Streptavidin Conjugates
   **Catalog Number:** See product information sheet
   **Unit Size:** 1 mg / 200 uL / 1 mL
   **Manufacturer/Supplier:** Biotium, Inc.
   46117 Landing Parkway, Fremont, CA 94538, USA
   Phone: 1-510-265-1027, Fax: 1-510-265-1352
   Web: [http://www.biotium.com](http://www.biotium.com)

   Use as laboratory reagent. For research use only. Not for food, drug, household, or cosmetic use.

2. HAZARDS IDENTIFICATION

   **GHS Classification**
   **Signal word** None
   **Health hazards** None
   **Physical hazards** None
   **Hazard statements** None
   **Precautionary statements** None

   **WHMIS classification** None
   **GHS hazard pictogram** None

   **Classification according to Regulation (EC) No 1272/2008[CLP]** None
   **Classification according to Directive 1999/45/EC** None

   **HMIS Classification**
   **Health hazard:** 1
   **Flammability:** 1
   **Physical hazards:** 0

   **NFPA Rating**
   **Health hazard:** 1
   **Fire:** 1
   **Reactivity Hazard:** 0

   **Labeling according to Regulation (EC) No 1272/2008[CLP]**
   **Hazard pictogram** None
   **Signal word** None
   **Hazard statements** None
   **Precautionary statements** None

3. COMPOSITION/INFORMATION ON INGREDIENTS

   For conjugates in liquid format only:

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS No.</th>
<th>EC No.</th>
<th>Index No.</th>
<th>Weight %</th>
<th>Classification according to 67/548/EEC</th>
<th>Classification according to regulation (EC)No1278/2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol</td>
<td>56-81-5</td>
<td>200-289-5</td>
<td>N/A</td>
<td>50%</td>
<td>N/A</td>
<td>NA</td>
</tr>
</tbody>
</table>
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 inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

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

5. FIREFIGHTING MEASURES

Suitable extinguishing media
Carbon dioxide, dry chemical extinguishers, foam extinguishers or water.

Special protective equipment for firefighters
Wear self contained breathing apparatus for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Avoid breathing vapors, mist or gas. Remove all sources of ignition.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up
Contain spillage. Soak up spilled substance with inert absorbent material. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid inhalation of vapor or mist.
Avoid direct contact with substance.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place.
Store at -20 °C.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters
Substance Glycerol
CAS no. 56-81-5

<table>
<thead>
<tr>
<th>country</th>
<th>Austria</th>
<th>Belgium</th>
<th>Denmark</th>
<th>European Union</th>
<th>France</th>
<th>Germany</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limit value, 8 hours</td>
<td>--</td>
<td>10 mg/m³</td>
<td>--</td>
<td>--</td>
<td>10 mg/m³</td>
<td>50 mg/m³ inhalable aerosol</td>
</tr>
</tbody>
</table>

SDS PSF008
### Limit value, short term

<table>
<thead>
<tr>
<th>Country</th>
<th>Hungary</th>
<th>Italy</th>
<th>Poland</th>
<th>Spain</th>
<th>Sweden</th>
<th>Netherlands</th>
<th>Switzerland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limit value, 8 hours</td>
<td>--</td>
<td>--</td>
<td>10 mg/m³</td>
<td>10 mg/m³</td>
<td>--</td>
<td>--</td>
<td>50 mg/m³ inhaling aerosol</td>
</tr>
<tr>
<td>Limit value, short term</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>100 mg/m³ inhaling aerosol</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country</th>
<th>United Kingdom</th>
<th>USA-NIOSH</th>
<th>USA-OSHA</th>
<th>Australia</th>
<th>Canada</th>
<th>Japan</th>
<th>South Korea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limit value, 8 hours</td>
<td>10 mg/m³</td>
<td>--</td>
<td>15 mg/m³ inhaling dust</td>
<td>10 mg/m³ (1)</td>
<td>10 mg/m³</td>
<td>--</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>Limit value, short term</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

Australia (1) This value is for inhaling dust containing no asbestos and < 1% crystalline silica.

Germany STV 15 minutes average value

### Personal protective equipment

#### Hand 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.

#### Respiratory protection

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).

#### Hygiene measures

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

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Name</td>
<td>Streptavidin Conjugate</td>
</tr>
<tr>
<td>Appearance</td>
<td>Liquid or solid</td>
</tr>
<tr>
<td>Odor</td>
<td>No information available</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>7.4</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No information available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporate rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability</td>
<td>No information available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No information available</td>
</tr>
</tbody>
</table>
11. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
No data available

Conditions to avoid
Heat, flames and sparks.

Materials to avoid
No data available

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - No data available

12. TOXICOLOGICAL INFORMATION

Acute toxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>LD50 (oral) rat</th>
<th>LD50 (dermal) rabbit</th>
<th>LC50 (inhalation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol</td>
<td>12,600 mg/kg</td>
<td>21,900 mg/kg</td>
<td>1 hr &gt;570 mg/m3</td>
</tr>
</tbody>
</table>

Other information on acute toxicity no data available
Skin corrosion/irritation 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.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity TDL (rat) - Route: Oral; Dose: 100 mg/kg 1 day prior to mating, TDL (human) - Route: Oral; Dose: 1428 mg/kg
Specific target organ toxicity - single exposure (Globally Harmonized System)
specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available
potential health effects
inhalaion may be harmful if inhaled. May cause respiratory tract irritation.
Ingestion may be harmful if swallowed.
Skin may be harmful if absorbed through skin. May cause skin irritation.
Eyes may cause eye irritation.
additional information
RTECS: MA8050000

13. ecological information
   toxicity  Ecotoxicity in water (LC50): 58.5 ppm 96 hours (Trout)
   persistence and degradability  no information available
   biodegradation  no information available
   mobility in soil  no information available
   results of PBT and vPvB assessment  no information available
   other adverse effects  no information available
   additional information  no information available

14. disposal considerations
   do not dispose product directly into sewage. Consult local state or national regulation for proper disposal.

15. transport information
   IATA, IMDG, DOT (US), TDG  Not dangerous goods during transportation
   UN number  None
   UN proper shipping name  None
   transport hazard class  None
   packing group  None
   environmental hazards  None
   transport in bulk according to Annex II of MARPOL 73/78 and IBC Code  None
   special precaution for user  None

16. regulation information
   us federal regulations
   US Toxic Substances Control Act (TSCA): Glycerol
   SARA 302: Glycerol
   SARA 313: Glycerol
   SARA 311/312 Hazards: Glycerol: Health hazard (immediate, acute); health hazard (chronic)
   WHMIS Hazard Class  None

17. other information
   Classification according to Regulation (EC) Nr. 1272/2008
   Refer to section 2 and section 3
Prepared by: Regulatory Department
Biotium Inc.
Version no. 9
Revision date (Initials) 4/11/18 (LR)
Reason for revision Addition of WHMIS classifications

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