

SAFETY DATA SHEET

1. IDENTIFICATION

- | | |
|----------------------------|---|
| 1.1. Product Name | Stemfactor™ LIF, Human Recombinant |
| 1.2. Catalog Number | 03-0016, 03-0016-100 |
| 1.3. Uses and restrictions | For research use only. Not for use in diagnostic or therapeutic applications. |
| 1.4. Manufacturer/Supplier | Stemgent®, Inc.
4 Hartwell Place
Lexington, MA 02421 USA
(617) 245-0000 |
| 1.5. In Case of Emergency | <ul style="list-style-type: none"> For medical emergencies, contact your local emergency center. For transportation emergencies, contact your local transportation authorities. For other non-medical or non-environmental emergencies please call (617) 245-0030, 8:00 am-4:00 pm EST, Monday – Friday. |

2. HAZARDS IDENTIFICATION

- | | |
|--|---------------------------------------|
| 2.1. Classification | Not a hazardous substance or mixture. |
| 2.2. Signal Word | Not applicable. |
| 2.3. Symbol | Not applicable. |
| 2.4. Hazard Statement(s) | Not applicable. |
| 2.5. Precautionary Statement(s) | Not applicable. |
| 2.6. Hazards not otherwise classified (HNOC) or not covered by GHS | None. |

3. COMPOSITION/INFORMATION ON INGREDIENTS

- | | |
|-----------------------|-----------------------------------|
| 3.1. Chemical Name | Stemfactor LIF, Human Recombinant |
| 3.2. Synonyms | Leukemia inhibitory factor |
| 3.3. Chemical Formula | Not applicable. |
| 3.4. Molecular Weight | 20 kDa |
| 3.5. CAS Number | Not applicable. |

HAZARDOUS COMPONENTS WITHIN MIXTURE

Component	CAS-No./EC-No.	Classification	Concentration
Leukemia inhibitory factor	Not available.	Not available.	Not available.

4. FIRST AID MEASURES

- | | |
|--|--|
| 4.1. First Aid Instructions | |
| <ul style="list-style-type: none"> General Advice Eyes | <p>Move out of exposure area. Consult a physician.</p> <p>Check for and remove contact lenses immediately and flush thoroughly with water for at least 15 minutes. Call a physician.</p> |



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- Skin
Immediately flush skin with copious amounts of water. Remove contaminated clothing and shoes and wash before use. Wash off with soap.
 - Ingestion
If swallowed, wash mouth out with water provided person is conscious. Do not induce vomiting. Loosen tight clothing. Contact a physician.
 - Inhalation
If inhaled, remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, call a physician.
 - Puncture Wounds
Wash thoroughly with soap and water. Allow wound to bleed freely. Contact a physician.
- 4.2. Most Important Symptoms/effects, acute and immediate
Described in section 2.
- 4.3. Indications of immediate medical attention and special treatment needed
No data available.

5. FIRE FIGHTING MEASURES

- 5.1. Suitable extinguishing media.
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- 5.2. Specific hazards arising from the chemical
No data available.
- 5.3. Special protective equipment and precautions for fire-fighters
Wear self contained breathing apparatus and full turnout gear for firefighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

- 6.1. Personal precautions, protective equipment, and emergency procedures
Use personal protective equipment (see section 8). Avoid direct contact with skin or eyes and prevent inhalation of dust. Ensure adequate ventilation.
- 6.2. Environmental Precautions
Do not let product enter drain.
- 6.3. Methods and materials for containment and clean up
Soak up spilt solution with inert absorbent material. Collect in suitable container and dispose of according to federal, state, and local environmental control regulations. Wash spill site after material pickup is complete.

7. HANDLING AND STORAGE

- 7.1. Precautions for safe handling
- Avoid inhalation, contact with eyes, skin, and clothing.
 - Keep in well-ventilated area.
 - For other precautions see section 2.5.
- 7.2. Conditions for safe storage, including any incompatibilities
Keep container tightly closed in a dry and well-ventilated place.
Recommended storage temperature: 2°C to 8°C



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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- | | |
|--|---|
| 8.1. Control Parameters | No known occupational exposure limits values. |
| 8.2. Appropriate engineering controls | Safety shower and eye bath. Mechanical exhaust required. |
| 8.3. Protection measures and Personal Protective Equipment | Handle in accordance with good industrial hygiene and safety practices. Wash thoroughly after handling. |
| <ul style="list-style-type: none"> Respiratory Protection | Respiratory protection is not required. Where protection from nuisance exposure is desired use type OV/AG (US) or type ABEK (EU EN 14387) respiratory cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). |
| <ul style="list-style-type: none"> Eye Protection | Chemical safety goggles. |
| <ul style="list-style-type: none"> Skin Protection | Protective gloves and lab coat. |

9. PHYSICAL/CHEMICAL PROPERTIES

- | | |
|--|--------------------|
| 9.1. Appearance | Clear liquid. |
| 9.2. Odor | No data available. |
| 9.3. Odor Threshold | No data available. |
| 9.4. pH | No data available. |
| 9.5. Melting point/freezing point | No data available. |
| 9.6. Initial boiling point and boiling range | No data available. |
| 9.7. Flash point | No data available. |
| 9.8. Evaporation rate | No data available. |
| 9.9. Flammability (solid, gas); | No data available. |
| 9.10. Upper/lower flammability or explosive limits | No data available. |
| 9.11. Vapor pressure | No data available. |
| 9.12. Vapor density | No data available. |
| 9.13. Relative density | No data available. |
| 9.14. Solubility(ies) | No data available. |
| 9.15. Partition coefficient: n-octanol/water | No data available. |
| 9.16. Auto-ignition temperature | No data available. |
| 9.17. Decomposition temperature | No data available. |
| 9.18. Viscosity | No data available. |
| 9.19. Explosive properties | No data available. |
| 9.20. Oxidizing properties | No data available. |



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10. STABILITY/REACTIVITY

10.1. Reactivity	No data available.
10.2. Chemical Stability	This product is stable.
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	No data available.

11. TOXICOLOGICAL INFORMATION

11.1. Toxicological effects	No data available.
<ul style="list-style-type: none"> • Acute toxicity • Skin corrosion/irritation • Serious eye damage/eye irritation • Respiratory or skin sensitization • Germ cell mutagenicity • Carcinogenicity 	<p>No data available.</p> <ul style="list-style-type: none"> • IARC: No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen. • ACGIH: No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen. • NTP: No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen. • OSHA: No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.
<ul style="list-style-type: none"> • Reproductive Toxicity • Specific target organ toxicity - single exposure • Specific target organ toxicity - repeated exposure • Aspiration hazard 	<p>No data available.</p> <p>No data available.</p> <p>No data available.</p> <p>No data available.</p>
11.2. Symptoms related to the physical, chemical and toxicological characteristics	No data available.
11.3. Effects of Short-Term Exposure	No data available.
11.4. Effects of Long-Term Exposure	No data available.



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11.5. Numerical measures of toxicity No data available.

11.6. Other Information None.

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. Disposal Method Waste must be disposed of in accordance with federal, state, and local environmental control regulations.

13.2. Personal safety Refer to section 8.

14. TRANSPORT INFORMATION

This product is considered non-hazardous for transport.

15. REGULATORY INFORMATION

U.S. Federal Regulations

- SARA 313 components This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels.
- SARA 302 components Does not contain any components subject to reporting.
- SARA 311/312 Hazards Chronic Health Hazard.
- Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see CFR 61) Does not contain any components subject to reporting.

U.S. State Regulations

- California Proposition 65 Does not contain any components subject to reporting.
- Massachusetts Right To Know Components Does not contain any components subject to reporting.
- Pennsylvania Right To Know Components Leukemia Inhibitory Factor, CAS-No: N/A
Disodium hydrogen orthophosphate, CAS No. 7558-79-4, Revision Date: 2007-03-01
- New Jersey Right To Know Components Leukemia Inhibitory Factor, CAS-No: N/A
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WHMIS Hazard Class

Not controlled under WHMIS (Canada).

16. OTHER INFORMATION

Notice

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Stemgent, Inc. shall not be held liable for any damage resulting from handling or from contact with the product. See Stemgent, Inc. website for terms and conditions of sale.

Preparation Date

April 6th, 2016

Version No.

1.2

Prepared by

Quality Control

END OF SAFETY DATA SHEET

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