

MATERIAL SAFETY DATA SHEET (MSDS)

1.0 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Description: All Recombinant HumanKine® expressed in Human Cell Line (See products below)

Activin A, beta NGF, BMP-2, BMP-4, BMP-7, Cystatin C, EPO, FGF-4, FGF-7 (KGF), FGF-8b, FGFbasic-TS, FLT3 Ligand, G-CSF, GM-CSF, HGF, HGH, HSA, IFN alpha 2A, IFN alpha 2B, IFN beta, IFN gamma, IL-1 beta, IL-2, IL-3, IL-4, IL-6, IL-7, IL-9, IL-10, IL-12, IL-17 (IL-17A), IL-17F, IL-23, IL-27, IL-28A, IL-28B, IL-29, LEFTY-1, LIF, M-CSF, Noggin, OSM, PDGFaa, PDGFbb, pro IGF-II, Pleiotrophin (PTN), SCF, SHH, TGF beta 1, TGF beta 2, TGF beta 3, TNF alpha, Thrombin, TPO, VEGF121, VEGF165, and Wnt3A.

Company Identification: Proteintech Group, Inc.

5400 Pearl Street, Suite 300 Rosemont, IL 60018, USA Phone: 1-888-478-4522

2.0 COMPOSITION/INFORMATION ON INGREDIENTS

(See Section 8.0, "Exposure Controls/Personal Protection", for exposure guidelines)

3.0 HAZARDS IDENTIFICATION AND POTENTIAL HEALTH EFFECTS

EYE CONTACT: May cause eye irritation, including redness, tearing, and possible

SKIN CONTACT: May consist of corrosive material and can cause burns and skin irritation.

INHALATION: Inhalation of high concentrations of dust may cause nasal or lung irritation. Inhalation of large quantities can produce gastrointestinal irritation and vomiting.

INGESTION: Material can be irritating to mucous membranes and respiratory tract.

4.0 FIRST AID MEASURES

EYE CONTACT: Flush eyes with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Then get immediate medical attention.

SKIN CONTACT: Immediately wash with plenty of soap and water for 15 minutes. Remove contaminated clothing.

INHALATION: If inhaled supply fresh air. If breathing becomes difficult call a physician. In case of unconsciousness, place patient on side position for transportation. If not breathing, give artificial respiration.

 $\label{local_independence} \textbf{INGESTION:} \ \textbf{If swallowed, induce vomiting.} \ \textbf{Get immediate medical attention.} \ \textbf{Consultable physician.}$

5.0 FIRE FIGHTING MEASURES

Large fires should be fought with water or alcohol resistant foam. Firefighters should wear protective equipment and self-contained breathing apparatus. As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source.

6.0 ACCIDENTAL RELEASE MEASURES

Use eye protection, gloves, and apron. Implement appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.

Clean up: Sweep up, place in bag and hold for disposal. Ventilate area and wash site after material is picked up.

7.0 HANDLING AND STORAGE

HANDLING: User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Wear personal protective equipment.

STORAGE: Suitable: Keep tightly closed. Store at -20°C to -80°C. Keep in properly labelled containers.

See product data sheet for more information on handling and storage.

8.0 EXPOSURE CONTROLS / PERSONAL PROTECTION

EYE PROTECTION: Safety glasses with side-shields.

SKIN PROTECTION: Wear lightweight protective clothing and gloves that cannot be penetrated by chemicals or oil.

INHALATION: In case of insufficient ventilation wear suitable respiratory equipment. **ENGINEERING CONTROLS:** Ensure adequate ventilation, especially in confined areas. Safety shower and eye bath. Mechanical exhaust required.

EXPOSURE GUIDELINES: Wash thoroughly after handling and prevent product from entering drains.

9.0 CHEMICAL AND PHYSICAL PROPERTIES

PHYSICAL STATE: Solid Lyophilized powder

pH: N/A

BOILING POINT: N/A
MELTING POINT: N/A
DECOMPOSITION TEMP.: N/A

SOLUBILITY: N/A

OXIDIZING PROPERTIES: N/A FLASH POINT: N/A WATER CONTENT: N/A

10.0 STABILITY AND REACTIVITY

STABILITY: Non-flammable and Non-explosive. Stable.
CONDITIONS TO AVOID: No information available.
MATERIALS TO AVOID: No information available.
HAZARDOUS DECOMPOSITION: No information available.

HAZARDOUS DECOMPOSITION: No information available.

HAZARDOUS POLYMERIZATION: Does not spontaneously polymerize.

11.0 TOXICOLOGICAL INFORMATION

EYE CONTACT: May cause eye irritation. **SKIN CONTACT:** May cause skin irritation.

INHALATION: May cause irritation of respiratory tract.

INGESTION: May be harmful if swallowed.

12.0 ECOLOGICAL INFORMATION

ECOTOXICITY EFFECTS: No information available. BIODEGRADATION: Inherently biodegradable. BIOACCUMULATION: Does not bioaccumulate. MOBILITY: No information available.

13.0 DISPOSAL INFORMATION

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

14.0 TRANSPORTATION INFORMATION

TRANSPORTATION: DOT/IATA/IMDG

Non-hazardous for any form of transportation.

15.0 REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006. Safety, health, and environmental regulations/legislation specific for the substance or mixture. For this product a chemical safety assessment was not carried out.

16.0 OTHER INFORMATION

Disclaimer: For research use only. Not intended for human or animal diagnostic or therapeutic use.

The above information was acquired by diligent search and the recommendations are based on prudent application of professional judgment. All materials and mixtures may present unknown hazards and should be used with caution.

Since the company cannot control the actual methods, volumes, or conditions of use, the company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein.

The information in this MSDS does not constitute a warranty, expressed or implied, including any implied warranty of merchantability or fitness for any particular purpose. If you have questions, or require more information, please email proteintech@ptglab.com.

For lab use only, not for diagnostics or therapeutic work.