ISOkine
PREMIUM GRADE GROWTH FACTORS AND CYTOKINES

Animal-Free | Endotoxin-Free | Carrier-Free

ISOkine® TNF-alpha, human, recombinant
Tumor necrosis factor alpha

SECTION 1 – IDENTIFICATION OF THE SUBSTANCE/ PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name: ISOkine® TNF-alpha,human, recombinant, produced in barley (Hordeum vulgare).
Trade name: ISOkine® TNF-alpha
Category no: IK2600

1.2. Product use: Ingredient for cell culture.

1.3. Manufacturer:

ORF Genetics
Víkurhvarf 7
203 Kópavogur
Iceland
Tel: +354 777 2780
e-mail: info@orfgenetics.com

1.4. Emergency telephone number: In case of emergency call your local emergency contact.

Emergency number: **112** (Europe, Australia, Africa, GSM mobile network).

Emergency number: **911** (USA, Canada, Asia, Africa).

SECTION 2 – HAZARDS IDENTIFICATION

3.1. Classification of the substance or mixture: Not hazardous according to CLP Regulation (EC) No 1272/2008. Exempt from registration REACH Regulation (EC) No. 1907/2006.

3.2. Hazard labeling: None required.

3.3. Other hazards: Not classified as hazardous.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS	EC No.	Description
Natrium chloride (NaCl)	7647-14-5	7647-14-5 / 231-598-3	Buffering agent
Potassium dihydrogen phosphate (KH_2PO_4)/ Dipotassium hydrogen phosphate (K_2HPO_4)	7778-77-0 / 7758-11-4	231-913-4 / 231-834-5	Buffering agent
Tumor necrosis factor alpha (TNF-alpha)	N/A	N/A	Protein

SECTION 4 – FIRST AID MEASURES

4.1. Description of first aid measures
Skin Contact: Wash with soap and water.
Eye Contact: Immediately flush eyes with plenty of water. Seek medical attention.
Inhalation: Move to fresh air. Seek medical attention if breathing becomes difficult.
Ingestion: No recognized ingestion hazard. Drink plenty of water. Seek medical attention.

SECTION 5 – FIREFIGHTING MEASURES

5.1. Classification of substance
Not flammable or explosive. Not sensitive to impact.

5.2. Means of extinguish
Water spray may be used to extinguish surrounding fire and cool exposed containers.

5.3. Protective equipment
Wear self-contained breathing apparatus for firefighting if needed.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions
Use personal protective equipment. Use eye protection and gloves. Avoid inhalation.

6.2. Environmental precautions
Prevent further leakage or spilling. Dispose in accordance with local environmental regulations.

6.3. Methods for clean up
Sweep up or vacuum powder or soak up liquid with inert absorbent material. Place into a suitable clean, dry, and closed container, and label for disposal. Ventilate area and wash surfaces exposed.

SECTION 7 – HANDLING AND STORAGE

7.1. Safe handling
Avoid contact with skin, eyes, and clothing. Avoid inhalation while re-suspending in liquid.

7.2. Storage
Keep in a tightly closed container. Store at -20°C.

7.3. Further information
See Data Sheet.

SECTION 8 – EXPOSURE CONTROL / PERSONAL PROTECTION

8.1. Exposure control
Use with adequate ventilation. Follow standard laboratory practices.

8.2. Personal protective equipment
Wear suitable protective clothing, chemical resistant gloves, and eye protection. Use face mask to avoid inhalation.

8.3 Environmental exposure controls
Avoid product from entering drains.

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SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1. Description of chemical and physical properties:
Physical state: Solid
Appearance: White to brownish powder.
Odor: None.
pH: 7.2 in buffer before dehydration.
Metling point/ freezing point: No data available.
Boiling point: No data available.
Flash point: No data available.
Flammability: Not flammable.
Explosive properties: No data available.
Oxidizing properties: No data available.
Vapor pressure: No data available.
Relative density: No data available.
Solubility/Water solubility: Soluble in water.
Partition coefficient n-octanol/water: No data available.
Viscosity: No data available.
Vapor density: No data available.
Evaporation rate: No data available.

SECTION 10 – STABILITY AND REACTIVITY

10.1. Stability and conditions to avoid: Stable under recommended conditions of storage and handling. Avoid humidity and excessive heat.
10.2. Materials to avoid: Strong acids, bases, and oxidizing agents.
10.3. Reactivity: Product non-reactive under recommended conditions of storage and handling.
10.4. Hazardous decomposition: No data available.

SECTION 11 – TOXICOLOGICAL INFORMATION

11.1 Potential health effects: May cause irritation to eyes and respiratory tract.
Skin contact: No hazard. May cause skin irritation.
Eye contact: May cause eye irritation.
Inhalation: May cause irritation if inhaled.
Ingestion: No recognized hazard.
Sensitization: No data available.
Effects of chronic exposure: No data available.
Carcinogenicity: No data available.
Reproductive toxicity: No data available.
Mutagenicity: No data available.

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SECTION 12 – ECOLOGICAL INFORMATION

12.1. Toxicity: Undetermined.
12.2. Biodegradability: Undetermined
12.3. Mobility: Undetermined
12.4. Bioaccumulation: Undetermined

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1. Waste disposal:
Dispose of product and packaging in accordance with local environmental regulations.

SECTION 14 – TRANSPORT INFORMATION

14.1. Special shipping information:
RID/ADR: Not hazardous for road transport.
IMDG: Not hazardous for sea transport.
IATA: Not hazardous for air transport.

SECTION 15 – REGULATORY INFORMATION

WHIMS Classification: No.
OSHA Hazard Communication Standard: No.
TSCA: No.
Other regulations: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains information required by CPR. This product is not classified as hazardous.

SECTION 16 – OTHER INFORMATION

16.1. Warranty:
The information in this SDS 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 property of the product. ORF Genetics shall not be held liable for any damage resulting from handling or from contact with the above product.

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