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# MSDS

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

< Product Name >

Desacyl-Ghrelin ELISA Kit

(Product No.: 97752)

Manufacturer : Mitsubishi Kagaku Iatron, Inc.

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< General Use >

Reagent for research use

First issue : Nov. 25, 2003

< Product Description >

Desacyl-Ghrelin assay reagent kit packaging eight components below.

- 1) Standard
- 2) Assay buffer
- 3) Antibody coated plate
- 4) HRP conjugated antibody
- 5) HRP dilution buffer
- 6) Substrate solution
- 7) Stop reagent
- 8) Washing buffer concentrate

MSDS No. 3072

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## 2. COMPOSITION, INFORMATION ON INGREDIENTS

< Component, Chemical name and Content >

- 1) Standard

Lyophilized standard containing Desacyl-Ghrelin, lactoprotein, sodium chloride, sodium phosphate, calf serum, 2-methyl-4-isothiazoline-3-one preservative(< 0.1%) and so on.

- 2) Assay buffer (22mL)

Buffer solution containing goat antibody to human anti-IgM, lactoprotein, sodium chloride, sodium phosphate, 2-methyl-4-isothiazoline-3-one preservative (< 0.1%) and so on.

- 3) Antibody coated plate (1plate)

Plate coated with mouse monoclonal antibody to N-terminal of Desacyl- Ghrelin.

- 4) HRP conjugated antibody (0.25mL)

Diluent stabilizer solution containing HRP labeled mouse monoclonal antibody to C-terminal of Desacyl-Ghrelin, bovine serum albumin and 2-methyl-4-isothiazoline-3-one preservative(< 0.1%).

- 5) HRP dilution buffer (22mL)

Buffer solution containing lactoprotein, sodium phosphate, 2-methyl-4-isothiazoline-3-one preservative(< 0.1%) and so on.

- 6) Substrate solution (22mL)

Preparation of 3,3',5,5'-Tetramethylbenzidine (TMB), 1-methyl-2-pyrrolidone(< 10%) and so on.

- 7) Stop reagent (6mL)

· Sulfuric acid CAS No.7664-93-9  
0.5M sulfuric acid solution.

U.N. Class : 8 U.N. Number : 1830

- 8) Washing buffer concentrate (40mL)

Buffer solution containing sodium chloride, sodium phosphate, 2-methyl-4-isothiazoline-3-one preservative(< 0.2%) and so on.

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## 3. HAZARDS IDENTIFICATION

< Emergency Overview >

Sulfuric acid of Stop reagent component causes a severe skin and eyes irritation.

No Information available for the remaining components of this kit. However, may be harmful by inhalation, in contact with skin and if swallowed and may be irritating to skin and eyes.

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## 4. FIRST AID MEASURES

< Inhalation >

If inhaled, immediately remove to fresh air. Call a physician if necessary.

< Eye contact >

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.  
Call a physician if necessary.

< Skin contact >

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

< Ingestion >

If swallowed, immediately give 2 glasses of water and induce vomiting. Call a physician.

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5 . FIRE FIGHTING MEASURES

< Flammable properties >

Noneflammable

< Extinguishing media >

Use suitable extinguishing media for the fire conditions. (water, foam, dry chemical etc.)

< Fire fighting instructions >

Wear suitable extinguishing apparatus for the fire conditions.

Do not contact to the components when extinguish fire.

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6 . ACCIDENTAL RELEASE MEASURES

< Land spill >

Soak up clearly with paper or cloth.

< Water spill >

Dilute large quantity of water.

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7 . HANDLING AND STORAGE

< Handling >

Seal the cap exactly.

Use suitable equipments.

Do not mouth pipette.

Do not leak, overflow and scatter.

Do not fall down and damage.

< Storage >

Store in cool and dark place at 36-47° F (2-8° C).

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8 . EXPOSURE CONTOROLS, PERSONAL PROTECTION

< Engineering controls >

Equip sink and flushing eyes facilities near operating place.

< Personal protective equipment >

To prevent any contact, wear protective equipments such as safety glasses, rubber gloves, as appropriate.

Eye/face protection: Wear safety glasses.

Skin protection: Wear disposable rubber gloves.

Respiratory protection: Do not breathe mist.

< Exposure guidelines >

The preparation does not have established guidelines.

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9 . PHYSICAL AND CHEMICAL PROPERTIES

< Appearance >

- |                               |                             |
|-------------------------------|-----------------------------|
| 1) Standard                   | Lyophilized solid or powder |
| 2) Assay buffer               | Liquid                      |
| 3) Antibody coated plate      | Plate                       |
| 4) HRP conjugated antibody    | Liquid                      |
| 5) HRP dilution buffer        | Liquid                      |
| 6) Substrate solution         | Liquid                      |
| 7) Stop reagent               | Liquid                      |
| 8) Washing buffer concentrate | Liquid                      |

< Color and Odor >

1) Standard	Slightly yellow ~ slightly brown, Odorless
2) Assay buffer	Colorless ~ slightly yellow, Odorless
3) Antibody coated plate	clear, Odorless
4) HRP conjugated antibody	Reddish, Odorless
5) HRP dilution buffer	Colorless ~ slightly yellow, Odorless
6) Substrate solution	Slightly reddish, Odorless
7) Stop reagent	Colorless ~ slightly yellow, Odorless
8) Washing buffer concentrate	Colorless ~ slightly yellow, Odorless

< pH >

1) Standard	7.0
2) Assay buffer	7.4
3) Antibody coated plate	-
4) HRP conjugated antibody	6.8
5) HRP dilution buffer	7.0
6) Substrate solution	No information available
7) Stop reagent	1.0
8) Washing buffer concentrate	6.0

< Vapor pressure >

No information available.

< Vapor density >

No information available.

< Boiling point >

No information available.

< Freezing/melting point >

No information available.

< Solubility in water >

1) Standard	Mix free to water.
2) Assay buffer	Mix free to water.
3) Antibody coated plate	-
4) HRP conjugated antibody	Mix free to water.
5) HRP dilution buffer	Mix free to water.
6) Substrate solution	Mix free to water.
7) Stop reagent	Mix free to water.
8) Washing buffer concentrate	Mix free to water.

< Specific gravity or density >

No information available.

< Molecular weight >

Not applicable

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## 10. STABILITY AND REACTIVITY

< Chemical stability >

Product is stable under normal handling and storage conditions.

< Conditions to avoid >

No information available.

< Incompatibility with other materials >

No information available.

< Hazardous decomposition products >

No information available.

< Hazardous polymerization >

No information available.

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## 11. TOXICOLOGICAL INFORMATION

< Acute inhalation effect >

No information available.

< Eye effect >

Sulfuric acid in Stop reagent causes eye irritation.  
The remaining components may cause eye irritation.

< Skin effect >

Sulfuric acid in Stop reagent causes skin irritation.  
The remaining components may cause skin irritation.

< Acute oral effect >

Ingestion may cause nausea, vomiting, stomach-ache and diarrhea.

< Subchronic effect >

No information available.

< Chronic effect/Carcinogenicity >

No information available.

< Mutagenicity >

No information available.

12. ECOLOGICAL INFORMATION

< Ecotoxicity >

No information available.

< Environmental fate >

No information available.

< Physical/Chemical Properties >

No information available.

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13. DISPOSAL CONSIDERATIONS

Comply with all federal, state and local regulations.

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14. TRANSPORT INFORMATION

Transport at 36-47° F (2-8° C).

Confirm no leakage and give no damage when loading.

Check loading exactly.

< Transport Guidelines >

The preparation does not have established guidelines.

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15. REGULATORY INFORMATION

Follow all the regulations in your country.

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16. OTHER INFORMATION

< reference >

- 1) 2-Methyl-4-isothiazoline-3-one preservative Material Safety Data Sheet from supplier, Rohm & Haas Japan.
- 2) Calf serum Certificate of Analysis from supplier, GIBCO BRL.
- 3) Diluent stabilizer solution Material Safety Data Sheet from supplier, Cygnus Technologies.
- 4) Bovine Serum Albumin Certificate of Origin from supplier, INTERGEN.
- 5) TMB solution Material Safety Data Sheet from supplier, DAKO.
- 6) 0.5M Sulfuric acid Material Safety Data Sheet from supplier, Wako Pure Chemical Industries.

< Others >

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