



MATERIAL SAFETY DATA SHEET

REVISION DATE: 30/12/2014

EDITION DATE: 19/01/2015

SECTION 1 – PRODUCT IDENTIFICATION / MANUFACTURER

Trade name and synonym: Acylated Ghrelin (human) Express EIA kit

Catalogue number: A05106

CAS number: None Applicable

Intended Product Use: Intended for research use only

Manufacturer: BERTIN PHARMA
Parc d'Activités Pas du Lac
10 bis, avenue Ampère
F-78180 Montigny-le-Bretonneux, France

Telephone Number: 33 (1) 39 30 62 60

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Hours of Operation: 9:00 am to 5:00 pm EU CT (GMT+1)

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SECTION 2 – HAZARDS IDENTIFICATION

GHS Identification: None Applicable

Symbols: None Applicable

Warning mention: None Applicable

Hazard mention: Components contained in this kit are non-hazardous substances for health and environment in said concentrations (they are mixtures that contain less than 1% hazardous chemicals and less 0.1% carcinogenic chemicals).

GHS Precautionary Statements:

Prevention:

P281 : Use personal protective equipment as required

P264 : wash hands thoroughly after handling

P262 : Do not get in eyes, on skin or on clothing

Response:

P308+P314 : if exposed or concerned : get medical advice/attention if you feel unwell.

Storage:

P403+P233 : Store in a well ventilated place. Keep container tightly closed.

Elimination:

P501 : dispose of content / container in accordance with local regulations.

REACH Identification: A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

Symbols: None Applicable

Symbol Letter: None Applicable

Hazard: None Applicable

Risk Phrase: None Applicable

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Antibody precoated Plate

Description: 96 wells microtiter striped plate coated with anti-Ghrelin antibody, vacuum sealed.

Identification of Components Not Classified as Dangerous



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This product contains the substances listed below, which are not defined as dangerous substances or hazardous chemicals as defined in European Community Directives 67/548/EEC or 1999/45/EC, and Hazard Communication Standard 29 CFR 1910.1200.

| Non Dangerous component | EINECS N° | CAS N° | Content (weight percent) | EU Hazard Symbol Letter | R Phrases |
|-------------------------|-----------|--------|--------------------------|-------------------------|-----------|
| Anti-Ghrelin antibody | None | None | Trade Secret | None | None |

3.2 Tracer

Description: anti-Ghrelin antibody coupled with AChE.

Identification of Dangerous Components

This product contains the substances listed below, which are defined as dangerous substances or hazardous chemicals as defined in European Community Directives 67/548/EEC or 1999/45/EC, and Hazard Communication Standard 29 CFR 1910.1200.

| Dangerous component | EINECS N° | CAS N° | Content (weight percent) | EU Hazard Symbol Letter | R Phrases |
|---------------------|-----------|--------------|--------------------------|-------------------------|------------------|
| Sodium azide | 247-852-1 | 26628-22-8 | 0.01% | T+, N | R28, R32, R50/53 |
| Component A | None | Trade secret | < 1% | Xn, N | R22, R41, R51/53 |

Identification of Components Not Classified as Dangerous

This product contains the substances listed below, which are not defined as dangerous substances or hazardous chemicals as defined in European Community Directives 67/548/EEC or 1999/45/EC, and Hazard Communication Standard 29 CFR 1910.1200.

| Non Dangerous component | EINECS N° | CAS N° | Content (weight percent) | EU Hazard Symbol Letter | R Phrases |
|---|-----------|--------|--------------------------|-------------------------|-----------|
| Anti-Ghrelin antibody coupled with Acetylcholinesterase | None | None | Trade Secret | None | None |

3.3 Standard

Description: Acylated Ghrelin (human) peptide.

Identification of Dangerous Components

This product contains the substances listed below, which are defined as dangerous substances or hazardous chemicals as defined in European Community Directives 67/548/EEC or 1999/45/EC, and Hazard Communication Standard 29 CFR 1910.1200.

| Dangerous component | EINECS N° | CAS N° | Content (weight percent) | EU Hazard Symbol Letter | R Phrases |
|---------------------|-----------|--------------|--------------------------|-------------------------|------------------|
| Sodium azide | 247-852-1 | 26628-22-8 | 0.01% | T+, N | R28, R32, R50/53 |
| Component A | None | Trade secret | < 1% | Xn, N | R22, R41, R51/53 |

Identification of Components Not Classified as Dangerous

This product contains the substances listed below, which are not defined as dangerous substances or hazardous chemicals as defined in European Community Directives 67/548/EEC or 1999/45/EC, and Hazard Communication Standard 29 CFR 1910.1200.

| Non Dangerous component | EINECS N° | CAS N° | Content (weight percent) | EU Hazard Symbol Letter | R Phrases |
|----------------------------------|-----------|--------|--------------------------|-------------------------|-----------|
| Acylated Ghrelin (human) peptide | None | None | Trade Secret | None | None |

3.4 Quality Control



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Description: Acylated Ghrelin (human) peptide.

Identification of Dangerous Components

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| Dangerous component | EINECS N° | CAS N° | Content (weight percent) | EU Hazard Symbol Letter | R Phrases |
|---------------------|-----------|--------------|--------------------------|-------------------------|------------------|
| Sodium azide | 247-852-1 | 26628-22-8 | 0.01% | T+, N | R28, R32, R50/53 |
| Component A | None | Trade secret | < 1% | Xn, N | R22, R41, R51/53 |

Identification of Components Not Classified as Dangerous

This product contains the substances listed below, which are not defined as dangerous substances or hazardous chemicals as defined in European Community Directives 67/548/EEC or 1999/45/EC, and Hazard Communication Standard 29 CFR 1910.1200.

| Non Dangerous component | EINECS N° | CAS N° | Content (weight percent) | EU Hazard Symbol Letter | R Phrases |
|----------------------------------|-----------|--------|--------------------------|-------------------------|-----------|
| Acylated Ghrelin (human) peptide | None | None | Trade Secret | None | None |

3.5 Acylated Ghrelin EIA Buffer

Description: 10 time concentrated dilution buffer.

Identification of Dangerous Components

This product contains the substances listed below, which are defined as dangerous substances or hazardous chemicals as defined in European Community Directives 67/548/EEC or 1999/45/EC, and Hazard Communication Standard 29 CFR 1910.1200.

| Dangerous component | EINECS N° | CAS N° | Content (weight percent) | EU Hazard Symbol Letter | R Phrases |
|---------------------|-----------|--------------|--------------------------|-------------------------|------------------|
| Sodium azide | 247-852-1 | 26628-22-8 | 0.1% | T+, N | R28, R32, R50/53 |
| Component A | None | Trade secret | < 1% | Xn, N | R22, R41, R51/53 |

Identification of Components Not Classified as Dangerous

This product contains the substances listed below, which are not defined as dangerous substances or hazardous chemicals as defined in European Community Directives 67/548/EEC or 1999/45/EC, and Hazard Communication Standard 29 CFR 1910.1200.

| Non Dangerous component | EINECS N° | CAS N° | Content (weight percent) | EU Hazard Symbol Letter | R Phrases |
|-------------------------------|-----------|-----------|--------------------------|-------------------------|-----------|
| Potassium phosphate dibasic | 231-834-5 | 7758-11-4 | Trade secret | None | None |
| Potassium phosphate monobasic | 231-913-4 | 7778-77-0 | Trade secret | None | None |
| Sodium chloride | 231-598-3 | 7647-14-5 | Trade secret | None | none |
| Albumin | 232-936-2 | 9048-46-8 | Trade secret | None | None |

3.6 Wash Buffer

Description: 10 time concentrated Wash buffer.

Identification of Components Not Classified as Dangerous

This product contains the substances listed below, which are not defined as dangerous substances or hazardous chemicals as defined in European Community Directives 67/548/EEC or 1999/45/EC, and Hazard Communication Standard 29 CFR 1910.1200.

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| Non Dangerous component | EINECS N° | CAS N° | Content (weight percent) | EU Hazard Symbol Letter | R Phrases |
|-------------------------------|-----------|-----------|--------------------------|-------------------------|-----------|
| Potassium phosphate dibasic | 231-834-5 | 7758-11-4 | 56% | None | None |
| Potassium phosphate monobasic | 231-913-4 | 7778-77-0 | 11% | None | None |
| Water | 231-791-2 | 7732-18-5 | 33% | None | None |

3.7 Ellman's reagent

Description: Ellman's reagent for revelation step.

Identification of Components Not Classified as Dangerous

This product contains the substances listed below, which are not defined as dangerous substances or hazardous chemicals as defined in European Community Directives 67/548/EEC or 1999/45/EC, and Hazard Communication Standard 29 CFR 1910.1200.

| Non Dangerous component | EINECS N° | CAS N° | Content (weight percent) | EU Hazard Symbol Letter | R Phrases |
|-------------------------|--------------|--------------|--------------------------|-------------------------|-----------|
| Ellman's reagent | Trade secret | Trade secret | ≥ 99% | None | None |

3.8 Tween 20

Description: additive for Wash Buffer.

Identification of Components Not Classified as Dangerous

This product contains the substances listed below, which are not defined as dangerous substances or hazardous chemicals as defined in European Community Directives 67/548/EEC or 1999/45/EC, and Hazard Communication Standard 29 CFR 1910.1200.

| Non Dangerous component | EINECS N° | CAS N° | Content (weight percent) | EU Hazard Symbol Letter | R Phrases |
|--|-----------|-----------|--------------------------|-------------------------|-----------|
| Polyoxyethylenesorbitan monolaurate (Tween 20) | 500-018-3 | 9005-64-5 | ≥ 99% | None | None |

SECTION 4 – FIRST AID MEASURES

After Inhalation: If a person inhales large amounts of the product, move the exposed person to fresh air at once. If breathing is difficult or stops, seek immediate medical attention.

After Skin contact: If the product contacts the skin, immediately flush the contaminated skin with mild soap and water. If this chemical penetrates clothing immediately remove the clothing and flush the skin with water. Seek medical attention immediately.

After eye contact: If the product contacts the eyes, promptly wash (irrigate) the eyes with large amounts of tepid water for at least 15 minutes, occasionally lifting the lower and upper lids. Seek medical attention immediately.

After swallowing: wash out mouth with water provided person is conscious. Seek medical attention. Never give an unconscious person anything by mouth

Information for Doctor: Show the product label or this MSDS.

SECTION 5 – FIRE FIGHTING MEASURES**Extinguishing media:**

Suitable: water spray, carbon dioxide, dry chemical powder, or appropriate foam.

Special risks: None identified

Thermal decomposition: no thermal decomposition degradation products are expected

Specific hazard(s): None identified



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Special protective equipment for fire-fighters: None identified

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Procedure(s) of personal precaution(s): wear suitable laboratory protective equipment lab coats, gloves and safety glasses.

Measure for Environmental protection: avoid penetration into sewerage systems, surface and ground water. Avoid soil pollution.

Methods for cleaning up: sweep up with suitable absorbing material, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

SECTION 7 – HANDLING AND STORAGE

Storage: keep tightly closed. Store at -20°C in a dark and dry place.

Handling: Seek appropriate training to safely handle this product under normal conditions. Use the recommended personal protective equipment (See Section 8) to prevent chemical exposures. Wash hands with soap and water before eating, drinking, or touching common items (phone, computer, etc.) to prevent cross contamination. Use this product with adequate ventilation. Do not breathe the vapour.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

| Exposure Limit Values | OSHA PEL | NIOSH REL | ACGIH TLV | Other |
|---|------------|------------|-------------------------------|-------|
| Anti-Ghrelin antibody | Not Listed | Not Listed | Not Listed | None |
| Sodium azide | Not Listed | Not Listed | Ceiling 0.29mg/m ³ | None |
| Component A | Not Listed | Not Listed | Not Listed | None |
| Anti-Ghrelin antibody coupled with Acetylcholinesterase | Not Listed | Not Listed | Not Listed | None |
| Acylated Ghrelin (human) peptide | Not Listed | Not Listed | Not Listed | None |
| Potassium phosphate dibasic | Not Listed | Not Listed | Not Listed | None |
| Potassium phosphate monobasic | Not Listed | Not Listed | Not Listed | None |
| Sodium chloride | Not Listed | Not Listed | Not Listed | None |
| Albumin | Not Listed | Not Listed | Not Listed | None |
| Water | Not Listed | Not Listed | Not Listed | None |
| Ellman's reagent | Not Listed | Not Listed | Not Listed | None |
| Polyoxyethylenesorbitan monolaurate (Tween 20) | Not Listed | Not Listed | Not Listed | None |

General hygiene measures: do not eat, drink and smoke when working with the kit.

Engineering controls: Mechanical exhaust required.

Personal protective equipment:

Respiratory protection: none

Eye protection: chemical safety glasses, with side shields.

Hand protection: Compatible chemical-resistant gloves (wash you hands before and after work).

Body protection: protective clothing

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical state (at +20°C):



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Solid : antibody precoated plate

Powder : Lyophilized powder for Tracer, Standard, Quality Control, EIA Buffer, Ellman's reagent.

Liquid : Wash buffer, Tween20

Colour:

Yellowish : Ellman's reagent

Colourless : antibody precoated plate, Tracer, Standard, Quality Control, EIA Buffer, Wash buffer, Tween20

Smell (odour):

Odourless

pH value (at 25°C):

6.8 - 7.4

Melting point (°C):

No data available

Initial Boiling point (°C):

No data available

No data.

Flash point (°C):

No data available

Flammability:

No data available

Vapour tension (°C):

No data available

Solubility in water:

Soluble

Partition coefficient a octanol/water:

No data available

Auto-ignition temperature

No data available

Decomposition temperature

No data available

Viscosity

No data available

SECTION 10 – STABILITY AND REACTIVITY

Stability: Product is stable under normal operating conditions and use as described in the product technical data sheet.

Conditions to be avoided: heat, light

Materials to avoid: Strong acids or bases, strong oxidizers, and extreme temperatures.

Hazardous decomposition products: Heating to decomposition temperature may produce carbon monoxide, carbon dioxide, nitrogen oxides.

Risk of hazardous reaction: No hazardous reaction known

SECTION 11 – TOXICOLOGICAL INFORMATION

Toxicology Data: Components contained in this kit are non-hazardous substances for health and environment in said concentrations. Toxicological information for this product as a whole does not exist, below is data for the individual components.

| Acute Toxicity | Toxicity Test | Exposure route | Dose | Observed effect |
|----------------|---------------|----------------|-----------|---|
| Sodium azide | LD50 (rat) | Oral | 27mg/kg | None Applicable |
| Sodium azide | LC50 (rat) | Inhalation | 37mg/m3 | Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Eye: Other. Behavioural: Convulsions or effect on seizure threshold. Lungs, Thorax, or Respiration: Structural or functional change in trachea or bronchi. |
| Sodium azide | LD50 (rabbit) | Dermal | 20mg/kg | None Applicable |
| Component A | LD50 (rat) | Oral | 500mg/kg | None Applicable |
| Component A | LD50(rabbit) | Dermal | 8000mg/kg | None Applicable |

Skin corrosion/irritation: No data available

Serious Eye Damage/Eye Irritation:

| | | | | |
|-------------|-------------------------|-----|--|-----------------------|
| Component A | Eye irritation (rabbit) | Eye | | Severe eye irritation |
|-------------|-------------------------|-----|--|-----------------------|

Respiratory or Skin Sensitization No data available

Germ Cell Mutagenicity: No data available

Reproductive Toxicity: No data available



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STOST-Single Exposure: No data available

STOST-Repeated Exposure: No data available

Aspiration Hazard: No data available

Carcinogenicity: Carcinogenetic information for this product as a whole does not exist. 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

Potential health effects

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.

Ingestion Harmful if swallowed.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes Causes eye burns.

Signs and Symptoms of Exposure

Nausea, Headache, Vomiting, Laboratory experiments in animals have shown sodium azide to produce a profound hypotensive effect, demyelination of myelinated nerve fibers in the central nervous system, testicular damage, blindness, attacks of rigidity, and hepatic and cerebral effects.

To the best of our knowledge, the chemical, physical, and toxicological properties of each component of this product have not been thoroughly investigated.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity: Ecotoxicity information for this product as a whole does not exist, below is data for the individual components

Sodium azide Toxicity to fish: LC50 - *Lepomis macrochirus* - 0,68 mg/l - 96,0 h

Toxicity to daphnia and other aquatic invertebrates: EC50 - *Daphnia pulex* (Water flea) - 4,2 mg/l - 48 h

Component A Toxicity to fish LC50 - *Pimephales promelas* (fathead minnow) - 8,9 mg/l - 96,0 h

Toxicity to daphnia and other aquatic invertebrates: EC50 - *Daphnia* - 26 mg/l - 48 h

Persistence and degradability: No data available

Bioaccumulation: No data available

Mobility in the ground: No data available

Other adverse effects: Sodium azide very toxic to aquatic life

SECTION 13 – DISPOSAL CONSIDERATION

Substance disposal: Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Contaminated packaging: Dispose the container in accordance with the international, federal, state and local requirements.

SECTION 14 – TRANSPORT INFORMATION

UN Number / Class / proper shipping name: Not listed, not dangerous goods.

Land Transport RID/ADR: as a mixture, the product is subject to no limitation for road transport.

Maritime Transport IMDG: as a mixture, the product is subject to no limitation for sea transport.

Air Transport IATA: as a mixture, the product is subject to no limitation for air transport.

Additional information: No additional information

SECTION 15 – REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.



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Category of Danger

T+ very toxic
N dangerous for the environment
Xn harmful

Risk phrases:

R22 Harmful if swallowed
R28 very toxic if swallowed
R32 contact with acids liberates very toxic gas
R41 Risk of serious damage to eyes.
R50/53 very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Training advice: seek effective chemical handling training to reduce the hazards associated with this product prior to use.

SECTION 16 – OTHER INFORMATION

License granted to make unlimited paper copies for internal use only.

The material safety data sheet contains data necessary to ensure safety and health and environmental protection in working with chemical substances. The above-stated data match the contemporary state of knowledge and experience and are in coincidence with legal regulations currently in effect. This product is a chemical mixture and can be solely used by persons with chemical education at their own risk.

This product is designed for research and development use only. Not for drug, household or other uses. The manufacturer has no responsibility for damage caused by unsuitable use and by disrespecting the enclosed working instructions.

The above information is believed to be current and accurate; however, Bertin Pharma makes no warranty with respect to such information and assumes no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.