

# SAFETY DATA SHEET

## I. Identification of product and the company information

Product Name: Trypsin-Porcine Sequence (rPT-GMP)

Product Cat No.: GA04.3

Application of the substance: Confirmed Uses

Manufacturer: BETAGENE Genetic

Add.: SIMBAY PARK, 160 BASHENG, SHANGHAI

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## II. Composition/information on ingredients

### 2.1 Substance

Mixture

### 2.2 Hazardous Ingredients

Trypsin:

Skin corrosion/irritation Category 2;

Serious eye damage/eye irritation Category 2A;

Respiratory sensitization Category 1;

Specific target organ toxicity - single exposure Category 3.

## III. Hazard of identification

### 3.1 Summary of emergency

powder, lyophilized May be corrosive to metals., May be harmful if swallowed., Causes severe skin burns and eye damage., May cause an allergic skin reaction., May cause allergy or asthma symptoms or breathing difficulties if inhaled., May cause respiratory irritation., Toxic to aquatic life with long lasting effects. First aiders need to protect themselves., Show this material safety data sheet to the doctor in attendance. After

inhalation: fresh air. Call in physician. In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower., Call a physician immediately. After eye contact: rinse out with plenty of water., Immediately call in ophthalmologist., Remove contact lenses. After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation)., Call a physician immediately., Do not attempt to neutralise.

Combustible. Development of hazardous combustion gases or vapours possible in the event of fire.

### 3.2 Hazard statement(s)

May be corrosive to metals.

May be harmful if swallowed.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause respiratory irritation.

Toxic to aquatic life with long lasting effects.

### 3.3 Prevention

Keep only in original container.

Do not breathe dusts or mists.

Wash skin thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be allowed out of the workplace.

Avoid release to the environment.

Wear protective gloves/ protective clothing/ eye protection/ face protection.

Wear respiratory protection.

### 3.4 Response

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Immediately call a POISON CENTER/ doctor.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing. Immediately call a POISON CENTER/ doctor.

If skin irritation or rash occurs: Get medical advice/ attention.

If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.

Take off contaminated clothing and wash it before reuse.

Absorb spillage to prevent material damage.

Collect spillage.

### 3.5 Storage

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Store in corrosive resistant container with a resistant inner liner.

Dispose of contents/ container to an approved waste disposal plant.

### 3.6 Physical and chemical hazards

May be corrosive to metals.

### 3.7 Health hazards

- May be harmful if swallowed.
- Causes severe skin burns and eye damage.
- Causes serious eye damage.
- May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- May cause an allergic skin reaction.
- May cause respiratory irritation.

### 3.8 Environmental hazards

- Toxic to aquatic life.
- Toxic to aquatic life with long lasting effects.

### 3.9 Other hazards

- Corrosive to the respiratory tract.

## IV. First aid measures

### 4.1 Description of first aid measures

#### General information

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

#### After inhalation

After inhalation: fresh air. Call in physician.

#### After skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

#### After eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.  
Remove contact lenses.

#### After swallowing

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the section II and/or in section XI.

### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

### 4.4 Notes to physician

No data available

## V. Fire-fighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media
- Water Foam Carbon dioxide (CO<sub>2</sub>) Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

## 5.2 Special hazards arising from the substance or mixture

Carbon oxides

Nitrogen oxides (NO<sub>x</sub>)

Sulfur oxides

Hydrogen chloride gas

Combustible.

## 5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

# VI. Accidental release measures

## 6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact.

Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section VIII.

## 6.2 Environmental precautions

Do not let product enter drains.

## 6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

## 6.4 Reference to other sections

For disposal see section XIII.

# VII. Handling and storage

## 7.1 Handling

Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 3.3.

## 7.2 Conditions for safe storage, including any incompatibilities

**Storage conditions**

No metal containers.

Tightly closed. Dry. Keep locked up or in an area accessible only to qualified or authorized persons.

**Storage stability**

Recommended storage temperature

2 - 8 °C

Storage class

Storage class (TRGS 510): 8A: Combustible, corrosive hazardous materials

**VIII. Exposure controls / personal protection****8.1 Exposure controls****Appropriate engineering controls**

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

**8.2 Personal protective equipment****Eye/face protection**

Use equipment for eye protection tested and approved under appropriate government standard such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles.

**Skin protection**

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use.

**Body Protection**

protective clothing.

**Respiratory protection**

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

**Control of environmental exposure**

Do not let product enter drains.

**IX. Physical and chemical properties****9.1 Information on basic physical and chemical properties**

<b>Form</b>	Lyophilized white powder
<b>Color</b>	Colorless
<b>Odour</b>	Nearly Odourless

<b>Odour Threshold</b>	No data available
<b>pH</b>	No data available
<b>Melting / Freezing Point</b>	No data available
<b>Boiling Point / Range</b>	No data available
<b>Flash Point</b>	No data available
<b>Evaporation rate</b>	No data available
<b>Vapor Pressure</b>	No data available
<b>Vapor Density</b>	No data available
<b>Relative Density</b>	No data available
<b>Water solubility</b>	No data available
<b>Partition coefficient: n-octanol/water</b>	No data available
<b>Solubility</b>	No data available
<b>Explosive Properties</b>	No data available
<b>Flammability (Solid, Gas)</b>	No data available
<b>Upper/lower flammability or explosive limits</b>	No data available
<b>Autoignition temperature</b>	No data available
<b>Decomposition temperature</b>	No data available
<b>Oxidizing Properties</b>	No data available

## 9.2 Other safety information

No data available.

## X. Stability and reactivity

**10.1 Chemical stability**

The product is chemically stable under standard ambient conditions (room temperature) .

**10.2 Possibility of hazardous reactions**

Data available.

**10.3 Conditions to avoid**

No information available.

**10.4 Incompatible materials**

Strong oxidizing agents Metals.

**10.5 Hazardous decomposition products**

In the event of fire: see section V .

**XI. Toxicological information****11.1 Information on toxicological effects****Mixture****Acute Toxicity**

Oral: No data available.

Symptoms: Possible symptoms:, mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Dermal: No data available.

**Skin Corrosion / Irritation**

Mixture causes severe burns.

**Serious Eye Damage / Irritation**

Mixture causes serious eye damage. Risk of blindness!

**Respiratory or Skin Sensitization**

Mixture may cause allergy or asthma symptoms or breathing difficulties if inhaled. Mixture may cause an allergic skin reaction.

**Germ Cell Mutagenicity**

No data available.

**Carcinogenicity**

No data available.

**Reproductive Toxicity**

No data available.

**Specific Target Organ Toxicity - Single Exposure**

Mixture may cause respiratory irritation.

**Specific Target Organ Toxicity - Repeated Exposure**

No data available.

**Aspiration Hazard**

No data available.

**11.2 Additional Information**

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

Other dangerous properties can not be excluded.  
Handle in accordance with good industrial hygiene and safety practice.

## XII. Ecological information

### 12.1 Toxicity

#### Mixture

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

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

### 12.6 Endocrine disrupting properties

No data available.

### 12.7 Other adverse effects

No data available.

## XIII. Disposal considerations

### 13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

## XIV. Transport information

### 14.1 UN number

ADR/RID: 1789      IMDG: 1789      IATA-DGR: 1789

### 14.2 UN proper shipping name

ADR/RID: HYDROCHLORIC ACID

IMDG: HYDROCHLORIC ACID

IATA-DGR: Hydrochloric acid

### 14.3 Transport hazard class(es)

ADR/RID: 8      IMDG: 8      IATA-DGR: 8

### 14.4 Packaging group

ADR/RID: III      IMDG: III      IATA-DGR: III

### 14.5 Environmental hazards

ADR/RID: no      IMDG Marine pollutant: no      IATA-DGR: no



**14.6 Special precautions for user**

Based on chemical properties, choose appropriate tools and conditions of transport. Transporting tools shall be equipped with appropriate and sufficient firefighting equipment and emergency leaking installations. If transporting by road, please go along the specified route.

**14.7 Incompatible materials**

Strong oxidizing agentsMetals.

**XV. Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

National regulatory information

Law on the Prevention and Control of Occupational Diseases.

**Other regulations**

Please pay attention on the waste treatment should also comply with local regulations requirement.

**XVI. Other information**

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