



# Safety Data Sheet

Cat. # 786-044

Proteinase K, Lyophilized

Size: 500mg





# Proteinase K, Lyophilized

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 10/28/2015

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Version: 7.1

### SECTION 1: Identification

#### 1.1. Identification

Product form : Substance  
Substance name : Proteinase K, Lyophilized  
CAS-No. : 39450-01-6  
Product code : 515P  
Synonyms : proteinase K / proteinase K, Glyc, PCR-Grade SL / proteinase, tritirachium album serine / tritirachium album serine / tritirachium alkaline proteinase  
BIG No : 37946

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : Chemical substance for research  
Enzyme

#### 1.3. Supplier

Geno Technology, Inc./ G-Biosciences  
9800 Page Avenue  
Saint Louis, 63132-1429 - United States  
T 800-628-7730 - F 314-991-1504  
[technical@GBiosciences.com](mailto:technical@GBiosciences.com) - [www.GBiosciences.com](http://www.GBiosciences.com)

#### 1.4. Emergency telephone number

Emergency number : Chemtrec **1-800-424-9300** (USA/Canada), **+1-703-527-3887** (Intl)

### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS US classification

Skin corrosion/irritation Category 2 H315 Causes skin irritation  
Serious eye damage/eye irritation Category 2 H319 Causes serious eye irritation  
Respiratory sensitization, Category 1 H334 May cause an allergy or asthma symptoms or breathing difficulties if inhaled  
Specific target organ toxicity (single exposure) Category 3 H335 May cause respiratory irritation  
Full text of H statements : see section 16

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger  
Hazard statements (GHS US) : H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H334 - May cause an allergy or asthma symptoms or breathing difficulties if inhaled  
H335 - May cause respiratory irritation  
Precautionary statements (GHS US) : P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.  
P264 - Wash hands, forearms and face thoroughly after handling.  
P271 - Use only outdoors or in a well-ventilated area.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P284 - [In case of inadequate ventilation] wear respiratory protection.  
P302+P352 - If on skin: Wash with plenty of water  
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing  
P304+P341 - If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P312 - Call a poison center or doctor if you feel unwell  
P321 - Specific treatment (see supplemental first aid instruction on this label)  
P332+P313 - If skin irritation occurs: Get medical advice/attention.  
P337+P313 - If eye irritation persists: Get medical advice/attention.  
P342+P311 - If experiencing respiratory symptoms: Call a poison center or doctor

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P362+P364 - Take off contaminated clothing and wash it before reuse.  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.  
P405 - Store locked up.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Substance type : Mono-constituent

Name	Common Name (Synonyms)	Product identifier	%	GHS US classification
Proteinase K, Lyophilized (Main constituent)	proteinase K / proteinase K, Glyc, PCR-Grade SL / proteinase, tritirachium album serine / tritirachium album serine / tritirachium alkaline proteinase	(CAS-No.) 39450-01-6	100	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 STOT SE 3, H335

Full text of hazard classes and H-statements : see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures general : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

First-aid measures after inhalation : Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact : Wash immediately with lots of water. Soap may be used. Take victim to a doctor if irritation persists.

First-aid measures after eye contact : Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.

First-aid measures after ingestion : Rinse mouth with water. Do not induce vomiting. Call Poison Information Centre ([www.big.be/antigif.htm](http://www.big.be/antigif.htm)). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital.

### 4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms : Causes skin irritation. May cause respiratory irritation. Causes serious eye irritation.

Symptoms/effects after inhalation : AFTER INHALATION OF DUST/MIST: Irritation of the respiratory tract. Irritation of the nasal mucous membranes.

Symptoms/effects after skin contact : Tingling/irritation of the skin.

Symptoms/effects after eye contact : Irritation of the eye tissue.

Symptoms/effects after ingestion : No effects known.

Chronic symptoms : Respiratory difficulties.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Quick-acting ABC powder extinguisher. Class A foam extinguisher. Water (quick-acting extinguisher, reel). Water. Class A foam.

Unsuitable extinguishing media : Quick-acting BC powder extinguisher. Quick-acting CO2 extinguisher.

### 5.2. Specific hazards arising from the chemical

Fire hazard : DIRECT FIRE HAZARD: Non-flammable. Most organic solids may burn if strongly heated.

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Explosion hazard : DIRECT EXPLOSION HAZARD: Most organic solids are liable to dust explosion hazard.

### 5.3. Special protective equipment and precautions for fire-fighters

Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.

Firefighting instructions : Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water.

Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Protective equipment : Gloves. Face-shield. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Dust cloud production: dust-tight suit.

Emergency procedures : Mark the danger area. Prevent dust cloud formation, e.g. by wetting. No naked flames. Wash contaminated clothes.

Measures in case of dust release : In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

For containment : Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray.

Methods for cleaning up : Stop dust cloud by humidifying. Scoop solid spill into closing containers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Avoid raising dust. Keep away from naked flames/heat. In finely divided state: use spark-/explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Keep container tightly closed. Powdered form: no compressed air for pumping over.

Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.

Storage temperature : < 0 °C

Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.

Information on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents.

Storage area : Keep container in a well-ventilated place. To be kept quick-frozen. Meet the legal requirements.

Special rules on packaging : SPECIAL REQUIREMENTS: closing, correctly labelled, meet the legal requirements. Secure fragile packagings in solid containers.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

**Proteinase K, Lyophilized (39450-01-6)**

**USA - ACGIH - Occupational Exposure Limits**

ACGIH Ceiling (mg/m <sup>3</sup> )	0.00006 mg/m <sup>3</sup>
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### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

#### Hand protection:

Gloves

#### Eye protection:

Face shield. In case of dust production: protective goggles

#### Skin and body protection:

Protective clothing. In case of dust production: head/neck protection. In case of dust production: dustproof clothing

#### Respiratory protection:

Dust production: dust mask with filter type P2

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Solid.
Color	: No data available
Odor	: No data available
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: Not applicable
Relative density	: Not applicable
Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: Not applicable
Explosive properties	: No data available
Oxidizing properties	: No data available

### 9.2. Other information

VOC content : 0 %

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

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### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Hazardous decomposition products.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: May cause an allergy or asthma symptoms or breathing difficulties if inhaled.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: May cause respiratory irritation.
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Potential Adverse human health effects and symptoms	: Causes skin irritation. May cause respiratory irritation. Causes serious eye irritation.
Symptoms/effects after inhalation	: AFTER INHALATION OF DUST/MIST: Irritation of the respiratory tract. Irritation of the nasal mucous membranes.
Symptoms/effects after skin contact	: Tingling/irritation of the skin.
Symptoms/effects after eye contact	: Irritation of the eye tissue.
Symptoms/effects after ingestion	: No effects known.
Chronic symptoms	: Respiratory difficulties.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
Ecology - air	: Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water	: Mild water pollutant (surface water). No data available on ecotoxicity.

### 12.2. Persistence and degradability

#### Proteinase K, Lyophilized (39450-01-6)

Persistence and degradability	Biodegradability in water: no data available.
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### 12.3. Bioaccumulative potential

#### Proteinase K, Lyophilized (39450-01-6)

Bioaccumulative potential	No bioaccumulation data available.
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### 12.4. Mobility in soil

#### Proteinase K, Lyophilized (39450-01-6)

Ecology - soil	No (test)data on mobility of the substance available.
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### 12.5. Other adverse effects

No additional information available

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### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

Waste treatment methods	: Waste treatment methods.
Product/Packaging disposal recommendations	: Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery. Dissolve or mix with a combustible solvent.
Additional information	: Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

### SECTION 14: Transport information

#### Department of Transportation (DOT)

In accordance with DOT

Other information : No supplementary information available.

#### Transportation of Dangerous Goods

#### Transport by sea

#### Air transport

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

##### Proteinase K, Lyophilized (39450-01-6)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

#### 15.2. International regulations

##### CANADA

##### EU-Regulations

##### National regulations

No additional information available

#### 15.3. US State regulations

### SECTION 16: Other information

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Revision date : 05/11/2017

Full text of H-phrases:

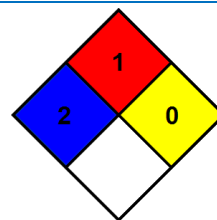
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NFPA health hazard	: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.
NFPA fire hazard	: 1 - Materials that must be preheated before ignition can occur.
NFPA reactivity	: 0 - Material that in themselves are normally stable, even under fire conditions.



SDS US (GHS HazCom 2012)

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*