



Material Safety Data Sheet (MSDS)
Revision Date: 11-27-2022

Kit Name: Proteinase K Antigen Retrieval Kit (2000 tests)
Catalog#: VB-6009

Components:

VB-6009-1	Proteinase K Stock Solution (20×)
VB-6009-2	Proteinase K Dilution Buffer

VB-6009-1 Proteinase K Stock Solution (20×) MSDS

1. Identification of the Substance/Mixture and Company

Product Name Proteinase K Stock Solution (20×)
Catalog# VB-6009-1
Product Description Component
Manufacturer/Supplier VitroVivo Biotech, LLC. 405 E Gude Dr., Suite 214, Rockville, MD 20850
Tel/fax Number Phone: 301-500-0499; Toll free: 1-800-260-9817 Fax: 844-248-6208

2. Hazards Identification

Hazard Classification

Skin corrosion/irritation - Category 2
Serious eye damage/eye irritation - Category 2A
Skin sensitizer - Category 1
Respiratory Sensitizer - Category 1
Specific Target Organ Toxicity Single Exposure - Category 3

Label Elements

Hazard Symbols
Signal Word: Danger

Hazard Statements

Causes serious eye irritation.
Causes skin irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
May cause drowsiness and dizziness.
May cause respiratory irritation.

Precautionary Statements

Prevention

Wear eye/face protection.
Use only in well-ventilated areas.
Wear protective gloves.
In case of inadequate ventilation wear respiratory protection.

3. Composition/information on ingredients

Mixtures Description: Mixture of the substances listed below.

Composition:

Component	CAS#
Proteinase K	39450-01-6
Tris	77-86-1
EDTA	60-00-04
Glycerol	56-81-5

4. First Aid Measures

Description of necessary first-aid measures

Eyes

Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

Skin

Wash affected area with plenty of water. Seek medical attention if symptoms persist.

Ingestion

Do not induce vomiting. Have victim drink 1-3 glasses of water to dilute stomach contents. Never administer anything by mouth if a victim is losing consciousness, is unconscious or is convulsing. Obtain medical attention immediately.

Inhalation

Remove from exposure. If there is difficulty in breathing, give oxygen. Obtain medical attention if symptoms persist.

Most important symptoms/effects, acute and delayed

Aside from the information found under description of necessary first aid measures (above) and Indication of immediate medical attention and special treatment needed, no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed Notes to Physicians

Treat symptomatically.

5. Firefighting Measures

Suitable (and unsuitable) Extinguishing Media

Use foam, dry chemical or carbon dioxide. Use water spray for surroundings and containers.

Specific hazards arising from the chemical

None known.

Special Protective Actions for Fire-Fighters

Wear full protective clothing and self-contained breathing apparatus

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Wear appropriate protective clothing.

Environmental Precautions

Prevent the material from entering drains or watercourses.

Methods and materials for containment and cleaning up

Contain and absorb using earth, sand or other inert material. Transfer into suitable containers for recovery or disposal.

7. Handling and Storage

Precautions for safe handling

Wear appropriate protective equipment when handling. Do not eat or drink while handling this material.

Conditions for safe storage

Store at room temperature away from heat and direct sunlight

8. Exposure Controls/Personal Protection

Control parameters

Exposure limits are listed below, if they exist.

Proteinase K

None established.

Appropriate engineering controls

No specific measures necessary.

Individual protection measures

Respiratory Protection

Respiratory protection not normally required.

Skin Protection

Chemical resistant gloves Eye/Face Protection Chemical goggles or safety glasses with side shields

Body Protection

Normal work wear.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical State: Liquid

Appearance: clear, colorless

Odor: odorless

pH: 8.0

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: Not available.

Decomposition Temperature: Not available.

Solubility: Soluble.

Specific Gravity/Density: Not available.

Molecular Formula: Solution

Molecular Weight: Not available.

10 Stability and Reactivity

Reactivity

No known reactivity.

Chemical Stability

Stable under normal conditions.

Possibility of hazardous reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Heat – high temperatures

Incompatible Materials

Strong acids – alkalines – oxidizing agents

Hazardous Decomposition Products

None known

11. Toxicological Information

Acute Toxicity

No data available to indicate product is acutely toxic.

Specific Target Organ Toxicity (STOT) – single exposure

Available information indicates this product may cause respiratory irritation.

Specific Target Organ Toxicity (STOT) – repeat exposure

No data available to indicate product or components will cause target organ effects after repeated exposure.

Serious Eye damage/Irritation

Available information indicates this product causes serious eye irritation.

Skin Corrosion/Irritation

Available information indicates this product causes skin irritation.

Respiratory or Skin Sensitization

Available information indicates this product can cause skin or respiratory sensitization.

Carcinogenicity

No data available to indicate product may present a carcinogenic hazard.

Germ Cell Mutagenicity

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Reproductive Toxicity

No data available to indicate either product or components present at greater than 0.1% may cause reproductive toxicity or birth defects.

Aspiration Hazard

Not an aspiration hazard.

12. Ecological Information

Ecotoxicity

No relevant studies identified.

Mobility in soil

No relevant studies identified.

Persistence/Degradability

No relevant studies identified.

Bioaccumulative Potential

No relevant studies identified.

Other adverse effects

No relevant studies identified.

13. Disposal Considerations

Waste treatment methods**General information**

When handling waste, the safety precautions applying to handling of the product should be considered.

Disposal methods

Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

14. Transport Information

DOT CFR 172.101 Data	Not Regulated
UN Proper Shipping Name	Not Regulated
UN Class None. UN Number	None.
UN Packaging Group	None.

Classification for AIR Transportation (IATA) Consult current IATA Regulations prior to shipping by air.

Environmental Hazards Not a marine pollutant

15. Regulatory Information

United States TSCA Inventory

This product is exempt from listing on the US Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

Canada DSL Inventory

This product is not listed on the Domestic Substance List (DSL).

WHMIS Classification

D2A.D2B

This product was classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations and the MSDS contains all the information required by these regulations.

SARA Title III Sect. 311/312 Categorization

Immediate (Acute)

16. Other Information

This information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of need that information is current, applicable and suited to the circumstances of use. Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, vendor assumes no responsibility for injury caused by abnormal use of the material even if reasonable safety procedures are followed. Any questions regarding this product should be directed to the manufacturer of the product as described in Section 1.

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent

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VB-6009-2 Proteinase K Dilution Buffer MSDS

1. Identification of the Substance/Mixture and Company

Product Name Proteinase K Dilution Buffer
Catalog# VB-6009-2
Product Description Component
Manufacturer/Supplier VitroVivo Biotech, LLC. 405 E Gude Dr., Suite 214, Rockville, MD 20850
Tel/fax Number Phone: 301-500-0499; Toll free: 1-800-260-9817 Fax: 844-248-6208

2. Hazards Identification

Classification of the substance or mixture

Appearance: clear, colorless liquid

Caution! May cause eye, skin, and respiratory tract irritation. This is expected to be a low hazard for usual handling.

Target Organs: none

Potential Health Effects

Eye: May cause eye irritation.

Skin: May cause skin irritation.

Ingestion: May cause respiratory of the digestive. Low hazard for usual industrial handling.

Chronic: No information found.

3. Composition/information on ingredients

Mixtures Description: Mixture of the substances listed below.

Composition:

Component	CAS#
EDTA	60-00-4
Tris, Hydrochloride	1185-53-1

4. First Aid Measures

Eye Contact Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention if symptoms occur.

Skin Contact Rinse skin with water. Get medical attention if symptoms occur.

Inhalation Remove to fresh air. Get medical attention if symptoms occur. If not breathing, give artificial respiration.

Ingestion Do NOT induce vomiting. Get medical attention.

Most important symptoms and effects No information available.

Notes to Physician Treat symptomatically

5. Firefighting Measures

Suitable Extinguishing Media Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

Unsuitable Extinguishing Media No information available
Flash Point Not applicable Method –
No information available

Autoignition Temperature No information available
Explosion Limits

Upper No data available
Lower No data available
Sensitivity to Mechanical Impact No information available
Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical

Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes.

Hazardous Combustion Products

Nitrogen oxides (NOx).

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health 1 Flammability 0 Instability 0 Physical hazards N/A

6. Accidental Release Measures

Personal Precautions Use personal protective equipment as required. Avoid contact with skin and eyes.

Environmental Precautions Avoid release to the environment. See Section 12 for additional Ecological Information.

Methods for Containment and Clean Up Soak up with inert absorbent material. Keep in suitable, closed

7. Handling and Storage

Precautions for safe handling

For precautions see section 2.2.

Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed.

Storage stability

Recommended storage temperature 2 - 8 °C

Storage class (TRGS 510): 12: Non Combustible Liquids

Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. Exposure Controls/Personal Protection

Control parameters

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Exposure controls

Appropriate engineering controls

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

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection

required Body Protection protective clothing

Respiratory protection

required when vapours/aerosols 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.

9. Physical and Chemical Properties

Physical State	Liquid
Appearance	Colorless
Odor	Odorless
Odor Threshold	No information available
pH	8.0
Melting Point/Range	No data available
Boiling Point/Range	No information available
Flash Point	No information available
Evaporation Rate	No information available
Flammability (solid,gas)	Not applicable
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	No information available
Specific Gravity	No information available
Solubility	No information available
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	No information available
Viscosity	No information available

10 Stability and Reactivity**Reactivity**

No data available

Chemical stability

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

Possibility of hazardous reactions

Violent reactions possible with: The generally known reaction partners of water.

Conditions to avoid

no information available

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

In the event of fire: see section 5

11. Toxicological Information**Information on toxicological effects****Mixture**

Acute toxicity	No data available
Inhalation	No data available
Dermal	No data available
Skin corrosion/irritation	No data available

Serious eye damage/eye irritation	No data available
Respiratory or skin sensitization	Mixture may cause an allergic skin reaction.
Germ cell mutagenicity	No data available
Carcinogenicity	
IARC:	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP:	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA:	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
Reproductive toxicity	No data available
Specific target organ toxicity - single exposure	No data available
Specific target organ toxicity - repeated exposure	No data available
Aspiration hazard	No data available
<u>Additional Information</u>	Not available

12. Ecological Information

<u>Toxicity</u>	
Mixture	No data available
<u>Persistence and degradability</u>	No data available
<u>Bioaccumulative potential</u>	No data available
<u>Mobility in soil</u>	No data available
<u>Results of PBT and vPvB assessment</u>	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
<u>Other adverse effects</u>	No data available

13. Disposal Considerations

Waste treatment methods

Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

14. Transport Information

DOT(US)	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods
Further information	Not classified as dangerous in the meaning of transport regulations.

15. Regulatory Information

SARA 302 Components

This material does not contain any components with a section 302 EHS TPQ.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

No SARA Hazards

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

16. Other Information

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NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent

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