

**1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING****1.1 Product Identifiers**

Product Name: Human Perforin ELISA Kit  
Catalog Number: CEA-B034  
UFI: No information available.

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified Uses: For Research Use Only.

**1.3 Details of the supplier of the safety data sheet**

Switzerland:

Company:	ACROBiosystems AG	Telephone:	+41-800-040-012
Address:	Switzerland Innovation Park Basel Area AG Lichtstrasse 35 4056 Basel	Fax:	+1-888-377-6111
Internet:	www.acrobiosystems.com	Email Address:	Customerservice@acrobiosystems.com

China: (Headquarter and Manufacturing Center)

Company:	ACROBIOSYSTEMS CO., LTD	Telephone:	+86-010-67855298
Address:	FLOOR 4, BUILDING 4, NO.8 HONGDA NORTH ROAD, BDA, BEIJING, CHINA	Fax:	+1-888-377-6111
		Email Address:	Customerservice@acrobiosystems.com

USA:

Company:	Acrobiosystems Inc.	Telephone:	+1-800-810-0816
Address:	1 Innovation Way, Newark, DE 19711, USA	Fax:	+1-888-377-6111
		Email Address:	Customerservice@acrobiosystems.com

**1.4 Emergency Telephone Number**

Emergency Tel: Switzerland: +41-800-040-012 / China: +86-010-67855298 / USA: +1-800-810-0816.

**2. HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture**

Classification according to Regulation EC Directives 67/548/EEC, 1999/45/EC, 1272/2008 [CLP], 1907/2006/EC[REACH], GHS and 29 CFR 1910.1200 [OSHA].

Skin Corrosion/Irritation - Category 2

Serious eye damage/eye irritation - Category 2A

**2.2 Label Elements**

Labeling according to Regulation (EC) No 1272/2008 [GHS/CLP]

Pictogram(s):



Signal Word: Warning

Hazard Statement(s):

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary Statement(s):

P264 Wash hands thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+352 IF ON SKIN: Wash with plenty of soap and water.

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 Specific treatment (see Section 4).

P332+313 If skin irritation occurs: Get medical advice/attention.

P337+313 If eye irritation persists: Get medical advice/attention.

P362+364 Take off contaminated clothing and wash it before reuse.

**2.3 Other Hazards - None****3. COMPOSITION / INFORMATION ON INGREDIENTS****3.1 Substances**

Not applicable.

3.2 Mixtures

Component	CAS No.	EC No.	Index No.	Classification	Conc.
Sulfuric Acid	7664-93-9	231-639-5	016-020-00-8	H315, H319	2 M

4. FIRST AID MEASURES

4.1 Description of first aid measures

**General Advice**

Consult a doctor and show this safety data sheet.

**If Inhaled**

Move person into fresh air. If not breathing, give artificial respiration. Consult a physician. Show this MSDS.

**In Case of Skin Contact**

Immediately take off contaminated clothing or shoes. Wash with plenty of soap and water. Consult a physician.

**In Case of Eye Contact**

Rinse thoroughly with water for at least 15 minutes and immediately consult a physician.

**If Swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Immediately consult a physician. Show this MSDS.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11.

4.3 Indication of immediate medical attention and special treatment needed

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media

**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

In case of fire, toxic and corrosive gases may be formed.

5.3 Precautions for fire-fighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use appropriate personal protective equipment to prevent contamination of skin, eyes and personal clothing. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

6.2 Environmental precautions

Keep away from drains.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For required personal protection equipment see section 8. For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid inhalation of vapor or mist. Use normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

7.3 Specific end use(s)

In addition to use mentioned in the Section 1.2, unforeseen other specific end uses.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

**Components with workplace control parameters**

Contains no substances with occupational exposure limit values and biological limit values.

**Derived No effect level (DNEL) & Predicted No Effect Concentration (PNEC)**

No data available.

**8.2 Exposure controls**

**Appropriate Engineering Controls**

Use with adequate ventilation including local extraction. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal Protection Equipment**

**Eye / Face Protection**

Wear approved safety goggles.

**Skin Protection**

Handle with protective gloves, plastic or rubber. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Body Protection**

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved. Wear suitable protective clothing as protection against splashing or contamination.

**Respiratory Protection**

In case of inadequate ventilation, use a suitable respirator. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Environment exposure controls**

Do not let product enter drains and soil, and keep container tightly closed before and after operation. Keep in suitable, closed containers for disposal.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties**

<b>Appearance</b>	Lyophilized white powder or clear liquid.	<b>Vapor Pressure</b>	No data available.
<b>Odor</b>	Little to none.	<b>Vapor Density</b>	No data available.
<b>Odor Threshold</b>	No data available.	<b>Relative Density</b>	No data available.
<b>pH</b>	No data available.	<b>Solubility(ies)</b>	Soluble
<b>Melting / Freezing Point</b>	No data available.	<b>Partition Coefficient</b>	No data available.
<b>Boiling Point / Range</b>	No data available.	<b>Autoignition Temperature</b>	No data available.
<b>Flash Point</b>	No data available.	<b>Decomposition Temperature</b>	No data available.
<b>Evaporation Rate</b>	No data available.	<b>Viscosity</b>	No data available.
<b>Flammability (Solid, Gas)</b>	No data available.	<b>Explosive Properties</b>	No data available.
<b>Upper / Lower Flammability or Explosive Limits</b>	No data available.	<b>Oxidizing Properties</b>	No data available.

**9.2 Other safety information**

No data available.

**10. STABILITY AND REACTIVITY**

**10.1 Reactivity**

Contact with metals produces highly flammable hydrogen gas. Addition of water liberates excessive heat.

**10.2 Chemical stability**

Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions**

Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid**

Bases, Halides, Metals, Alkalis, Acetonitrile.

**10.5 Incompatible materials**

Most metals, oxidizers, reducers, bases, metal carbonates, cyanides, sulphides, carbides, oxides, metal acetylides, hydrides, halogens, organic or combustible materials, perchlorates, acetonitrile, permanganates, alcohols, picrates.

**10.6 Hazardous decomposition products**

Products formed under fire conditions: oxides of Sulphur, hydrogen gas.

**11. TOXICOLOGICAL INFORMATION**

**11.1 Information on toxicological effects**

**Acute Toxicity**

Can cause severe burns upon contact while the vapors or mist are corrosive and can cause severe irritation or damage to the nose, throat and lungs. Ingestion of this product causes pain, nausea and vomiting and may be fatal if large doses are ingested.

**Skin Corrosion / Irritation**

Can cause severe burns.

**Serious Eye Damage / Irritation**

Can cause severe burns.

**Respiratory or Skin Sensitization**

Classified based on available data.

**Germ Cell Mutagenicity**

Classified based on available data.

**Carcinogenicity**

Classified based on available data.

**Reproductive Toxicity**

Classified based on available data.

**Specific Target Organ Toxicity-Single Exposure**

Classified based on available data.

**Specific Target Organ Toxicity-Repeated Exposure**

Classified based on available data.

**Aspiration Hazard**

Can cause severe burns.

**Symptoms / Routes of Exposure**

Inhalation: Harmful if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion: Harmful if swallowed. Irritating to mouth, throat and stomach. Causes burns.

Skin: Causes skin irritation / causes burns.

Eyes: Causes serious eye irritation / causes burns.

Delayed / Immediate Effects: Repeated skin contact with this product may lead to dermatitis while repeated inhalation may cause bronchitis, conjunctivitis, respiratory infections, emphysema and digestive disturbances. May cause erosion and discoloration of the teeth.

**11.2 Information on other hazards****Endocrine disrupting properties**

Classified based on available data.

**Other information**

None

**12. ECOLOGICAL INFORMATION****12.1 Toxicity**

This product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

**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**

No data available.

**12.6 Endocrine disrupting properties**

No data available.

**12.7 Other adverse effects**

No data available.

**12.8 Additional information**

None

**13. DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods**

**Product**

Dispose of waste in accordance to applicable national, regional, or local regulations.

**Contaminated Packaging**

Dispose in the same manner as unused product.

**14. TRANSPORT INFORMATION**

Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID, DOT and IATA.

**14.1 UN-Number**

UN2796

**14.2 UN proper shipping name**

Battery fluid, acid or Sulfuric acid with not more than 51 percent acid.

**14.3 Transport hazard class(es)**

8

**14.4 Packaging group**

II

**14.5 Environmental hazards**

This product is not classified as environmentally hazardous according to the UN Model Regulations, nor a marine pollutant according to the IMDG Code.

**14.6 Special precautions for users**

No information available.

**15. REGULATORY INFORMATION**

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010, (EU) 2017/542 and (EU) 2020/878.

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

Component	SVHC	EC inventory	TSCA	SARA 313	SARA 311/312	CERCLA Reportable Quantity	California Proposition 65	KECI	AIIC	ENCS
Sulfuric Acid	×	√	√	×	√	√	√	√	√	√

- [SVHC] Candidate list of Substances of Very High Concern for authorization under EU REACH regulation
- [EC inventory] European Inventory of Existing Commercial Chemical Substances
- [TSCA] United States Toxic Substances Control Act Inventory
- [SARA 313] Superfund Amendments and Reauthorization Act: Part 313
- [SARA 311/312] Superfund Amendments and Reauthorization Act: Part 311/312
- [CERCLA Reportable Quantity] Comprehensive Environmental Response, Compensation, and Liability Act
- [California Proposition 65] Safe Drinking Water and Toxic Enforcement Act of 1986
- [KECI] Korea Existing Chemicals Inventory
- [AIIC] Australian Inventory of Industrial Chemical (AIIC)
- [ENCS] Japan Inventory of Existing & New Chemical Substances

**15.2 Chemical safety assessment**

A Chemical Safety Assessment has not been made for this product.

**16. OTHER INFORMATION**

The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein.

End of safety data sheet.