

Athens Research and Technology, Inc.

SDS - SAFETY DATA SHEET


1. IDENTIFICATION

PRODUCT NAME	Calpain 1, Human Erythrocyte
PRODUCT NO.	16-05-030112
BRAND	Athens Research and Technology
Use of substance	Research Reagent

SUPPLIER	Athens Research and Technology 110 Trans Tech Drive Athens, GA 30601 USA
TELEPHONE	+1 706-546-0207
FAX	+1 706-546-7395
EMERGENCY PHONE	+1 706-546-0207

2. HAZARDS IDENTIFICATION

OSHA Hazards	Target Organ Effect
Other Hazards which do not result in classification	Human Source: Appropriate safety procedure must be followed for human source material as found in: <i>Laboratory Biosafety Guidelines (3rd Ed., 2004)</i> Handle as if capable of transmitting infectious agents.
Target Organs	Kidney

GHS Classification	Skin Irritation (Category 3); Eye Irritation (Category 2B); Reproductive Toxicity (Category 1B)
Signal Word	Danger
Pictogram	

Hazard Statements:

H360D	Reproductive	May damage the unborn child
H313/H316	Skin	May be harmful if absorbed through the skin. May cause irritation.
H320	Eyes	May cause eye irritation
H333/H335	Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.

Precautionary Statements:

P201	Obtain special instructions before use	
P305+P35+P338	Eyes	IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	If exposed or concerned: Get medical advice/attention.	

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HMIS Classification:		NFPA Rating:	
HEALTH	0	HEALTH	0
FLAMMABILITY	0	FIRE	0
PHYSICAL HAZARD	0	REACTIVITY	0
PERSONAL PROTECTION	Safety Glasses/gloves	SPECIAL	

3. COMPOSITION/INFORMATION ON INGREDIENTS:

SUBSTANCE					MIXTURE	
Chemical ID	Common name/synonym	CAS-No.	EC No.	Classifications	Concentration	
Calpain-1	mu-Calpain	-	-	-	≥0.1%	
C ₃ H ₄ N ₂	Imidazole, 1,3-Diaza-2,4-cyclopentadiene, Glyoxaline	288-32-4	206-019-2	Acut.Tox. 4; Skin Corr. 1B; Repr. 1B; H302, H314, H360D	≤0.1%	
C ₂ H ₆ SO	βMercaptoethanol, BME, 2-mercaptoethanol	60-24-2	200-464-6	-	≤0.04%	
C ₁₀ H ₁₆ N ₂ O ₈	Ethylenediaminetetraacetic acid, EDTA, Edathamil	60-00-4	200-449-4	-	≤0.04%	
C ₁₄ H ₂₄ N ₂ O ₁₀	Ethylene glycol-bis(2-aminoethylether)-N,N,N',N'-tetraacetic acid, EGTA, Egtazic acid	67-42-5	200-651-2	-	≤0.04%	
C ₃ H ₈ O ₃	Glycerol	56-81-5	200-289-5	-	30%	
H ₂ O	Water	7732-18-5	231-791-2	-	≤70%	

See Section 16 for the full text of H-Statements mentioned in this section.

4. FIRST AID MEASURES

Inhalation	If inhaled, move person into fresh air. If not breathing, give CPR
Skin Contact	In case of skin contact wash off with soap and plenty of water
Eye Contact	In case of eye contact flush eyes with water
Ingestion	If swallowed never give anything by mouth to an unconscious person. Rinse mouth with water. Consult physician.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
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Hazards From Chemical	Not flammable or combustible
Special PPE for Firefighters	Use SCBA and full turnout gear

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Safety glasses/goggles, gloves, labcoat.
Environmental Precautions	Do not let product enter drain system
Methods & Materials for containment and clean up	Pick up and arrange disposal in accordance with existing disposal practices employed for infectious waste at your location. Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling	Avoid contact with skin and eyes. Provide appropriate exhaust ventilation at places where dust is formed.
Conditions for safe storage	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 Recommended Storage temperature: -70 C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limit Value	Components with workplace control parameters				
	Components	CAS-No.	Value	Control Parameters	Basis
	Glycerol	56-81-5	TWA	10mg/m ³	USA. OSHA-Table Z-1 Limits for Air contaminants-1910.1000
			TWA	10mg/m ³	
			TWA	10mg/m ³	
	Remarks	Upper Respiratory Tract irritation			
			TWA	15mg/m ³	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
			TWA	5mg/m ³	
PPE – Personal	Respiratory Protection – Not required				

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Protective Equipment	<p>Hand Protection – Handle with gloves, inspect prior to use</p> <p>Eye Protection – Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH or EN 166</p> <p>Skin & Body Protection – PPE must be selected according to the concentration and amount of the dangerous substance at the specific workplace.</p> <p>Hygiene Measures – General industrial hygiene practice</p>
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9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Form	Aqueous solution
Color	Clear liquid

SAFETY DATA

pH	6.8
Melting point/Freezing Point	No data available
Boiling Point	No data available
Flash Point	No data available
Ignition temperature	No data available
Auto-ignition temperature	No data available
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor pressure	No data available
Density	No data available
Solubility in Water	No data available
Solubility in Oil	No data available
Solubility in Acetone	No data available
Relative vapor density	No data available
Odor Characteristics	No data available
Evaporation rate	No data available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended storage conditions
Possibility of hazardous reactions	No data available
Conditions to Avoid	No data available
Materials to Avoid	No data available

11. Toxicological Information

Acute Toxicity Data: Not hazardous

NUMERIC MEASURES OF TOXICITY

Oral LD50	No data available
Inhalation LC50	No data available
Dermal LD50	No data available
Other acute toxicity information	No data available

ROUTES OF EXPOSURE

Ingestion	May be harmful if swallowed
Skin	May be harmful if absorbed through the skin. May cause irritation.
Eyes	May cause eye irritation
Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.

Potential Health Effects

Single Exposure	No data available
Repeated Exposure	No data available
Related Symptoms	No data available
Acute & Chronic Effects	No data available
Reproductive toxicity	No data available
Teratogenicity	No data available
Mutagenicity	No data available

Signs and Symptoms of Exposure – Prolonged or repeated exposure may cause: Nausea, Headache, Vomiting.

Carcinogenicity

IARC	No component of this product present at levels greater than or equal to 0.1% is identified as possible or confirmed human carcinogen.
NTP	
OSHA	

12. Ecological Information

Ecotoxicity, Persistence/Degradability, Bioaccumulation, Mobility in Soil, and Other Adverse Effects: No Data Available

13. Disposal Considerations

Contaminated packaging	Dispose of unused product in accordance with environmental control regulations
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14. Transport Information

DOT Classification	Not dangerous goods. This substance is considered to be non-hazardous for transport. Non-hazardous for air transport.
IMDG	Not dangerous goods. This substance is considered to be non-hazardous for transport. Non-hazardous for air transport
IATA	Not dangerous goods. This substance is considered to be non-hazardous for transport. Non-hazardous for air transport

15. Regulatory Information

OSHA Hazards	Target Organ effect
SARA 311/312 Hazards	Chronic Health Hazard
SARA 302 Components Subject to reporting levels established by SARA Title III, Section 302:	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components Subject to reporting levels established by SARA Title III, Section 313:	This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels.

Massachusetts Right To Know Components	Calpain-1 - CAS-No. Not applicable Imidazole –CAS-No. 288-32-4 βMercaptoethanol –CAS-No. 60-24-2 Ethylenediaminetetraacetic acid –CAS-No. 60-00-4 Ethylene glycol-bis(2-aminoethylether)- <i>N,N,N',N'</i> -tetraacetic acid –CAS-No. 67-42-5 Glycerol –CAS-No. 56-81-5 Water –CAS-No. 7732-18-5
Pennsylvania Right To Know Components	Calpain-1 - CAS-No. Not applicable Imidazole –CAS-No. 288-32-4 βMercaptoethanol –CAS-No. 60-24-2 Ethylenediaminetetraacetic acid –CAS-No. 60-00-4 Ethylene glycol-bis(2-aminoethylether)- <i>N,N,N',N'</i> -tetraacetic acid –CAS-No. 67-42-5 Glycerol –CAS-No. 56-81-5 Water –CAS-No. 7732-18-5
New Jersey Right To Know Components	Calpain-1 - CAS-No. Not applicable Imidazole –CAS-No. 288-32-4 βMercaptoethanol –CAS-No. 60-24-2 Ethylenediaminetetraacetic acid –CAS-No. 60-00-4 Ethylene glycol-bis(2-aminoethylether)- <i>N,N,N',N'</i> -tetraacetic acid –CAS-No. 67-42-5

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	Glycerol -CAS-No. 56-81-5 Water -CAS-No. 7732-18-5
California Prop. 65 Components	This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other reproductive harm.

16. Other Information

Text of H-Statements mentioned in Section 3.

Acute Tox.-Acute Toxicity

H302-Harmful if swallowed

H314-Causes severe skin burns and eye damage

H360D-May damage the unborn child

Repr.-Reproductive toxicity

Skin Corr.-Skin corrosion

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The above information is believed to be correct but does not purport to be all inclusive. It shall be used only as a guide for experienced personnel. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

This material is a laboratory reagent for research use only. It is not to be administered to humans or used for any drug purpose.

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