

Athens Research and Technology, Inc.

SDS - SAFETY DATA SHEET

1. IDENTIFICATION

PRODUCT NAME	Calmodulin Bovine Brain, High Purity
PRODUCT NO.	16-BR-030112-HP-BOVINE
BRAND	Athens Research and Technology
Use of substance	Research Reagent

SUPPLIER	Athens Research and Technology 110 Trans Tech Drive Athens, GA 30601 USA
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2. HAZARDS IDENTIFICATION

OSHA Hazards	No known OSHA Hazards
Other Hazards which do not result in classification	Bovine Source: Appropriate safety procedure must be followed. Handle as if capable of transmitting infectious agents.

GHS Classification	Not a dangerous substance or mixture according to the Globally Harmonised System (GHS)
Signal Word	Warning

Hazard Statements:

H303	Ingestion	May be harmful if swallowed
H313/H316	Skin	May be harmful if absorbed through the skin. May cause irritation.
H319	Eyes	May cause eye irritation
H333/H335	Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.

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

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3. COMPOSITION/INFORMATION ON INGREDIENTS:

The product contains no substances which at their present concentrations are considered to be hazardous to health.

SUBSTANCE					MIXTURE
Chemical ID	Common name/synonym	CAS-No.	EC No.	Classifications	Concentration
Calmodulin - Bovine	CaM, Phosphodiesterase 3',5'-cyclic nucleotide activator - Bovine	73298-54-1	277-370-7	-	≥12%
C ₈ H ₁₈ N ₂ O ₄ S	HEPES, 4-(2-Hydroxyethyl)piperazine-1-ethanesulfonic acid	7365-45-9	230-907-9	-	≤86%
CaCl ₂	Calcium Chloride	10035-04-8	233-140-8	-	≤2%
C ₄ H ₁₀ O ₂ S ₂	DL-Dithiothreitol, Cleland's reagent, DTT	3483-12-3	222-468-7	-	≤0.002%

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.
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. Sweep up and shovel. Keep in suitable, closed containers for disposal.

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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. Recommended Storage temperature: -20 C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limit Value	Contains no substances with occupational exposure limit values
PPE – Personal Protective Equipment	<p>Respiratory Protection – Not required</p> <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>

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Form	Solid, Lyophilized
Color	white

SAFETY DATA

pH	7.4
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

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

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	

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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	No known OSHA hazards
SARA 311/312 Hazards	No SARA hazards Reportable qty: lowest RQ>999999 lbs
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	No components are subject to the Massachusetts Right to Know Act
Pennsylvania Right To Know Components	Calmodulin-Bovine - CAS-No. 73298-54-1 HEPES -CAS-No. 7365-45-9 Calcium Chloride, dihydrate -CAS-No. 10035-04-8 DL-Dithiothreitol -CAS-No. 3483-12-3
New Jersey Right To Know Components	Calmodulin-Bovine - CAS-No. 73298-54-1 HEPES -CAS-No. 7365-45-9 Calcium Chloride, dihydrate -CAS-No. 10035-04-8 DL-Dithiothreitol -CAS-No. 3483-12-3

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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.
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16. Other Information

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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.

Athens Research and Technology shall not be held liable for any damage resulting from handling or from contact with the above product. See www.athensresearch.com for additional terms and conditions of sale.

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