



MATERIAL SAFETY DATA SHEET

HIF-1.alpha. (C-Term) Polyclonal Antibody

Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108

Revision: 08/02/2011
Supersedes Revision: 05/25/2005

1. Identification of the Substance/Mixture and of the Company/Undertaking

Product Code: 10006421

Product Name: HIF-1.alpha. (C-Term) Polyclonal Antibody

Manufacturer Information

Company Name: Cayman Chemical Company

Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300

Alternate Emergency Contact: CHEMTREC Outside USA and Canada: +1 (703)527-3887

Information: Cayman Chemical Company +1 (734)971-3335

Web site address: www.caymanchem.com

Synonyms: Hypoxia Inducible Factor-1.alpha.

2. Hazards Identification

Emergency Overview: Avoid contact and inhalation.
Target Organ(s): eyes, kidneys, respiratory system, and skin.

Route(s) of Entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection

Potential Health Effects (Acute and Chronic): Material may be irritating to the mucous membranes and upper respiratory tract.
May be harmful by inhalation, ingestion, or skin absorption.
May cause eye, skin, or respiratory system irritation.

Signs and Symptoms Of Exposure: Prolonged exposure may cause nausea, headache, and vomiting.
To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Medical Conditions Generally Aggravated By Exposure: No data available.

3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases	RTECS #
1. HIF-1.alpha. (C-Term) Polyclonal Antibody	NA	0.0 -1.0 %	NA	No phrases apply.	NA
2. Glycerol	56-81-5	0.0 -50.0 %	200-289-5	No phrases apply.	MA8050000
3. Bovine Serum Albumin (BSA)	9048-46-8	0.1 %	232-936-2	No phrases apply.	MT6446000
4. Sodium azide	26628-22-8	0.02 %	247-852-1	R28-32-50/53	VY8050000
5. Sodium chloride	7647-14-5	0.8 %	231-598-3	No phrases apply.	VZ4725000
6. Trizma base	77-86-1	0.3 %	201-064-4	R36/37/38	TY2900000
7. Water	7732-18-5	48.68 -98.78 %	231-791-2	No phrases apply.	ZC0110000

4. First Aid Measures

Emergency and First Aid Procedures:

If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

If swallowed, wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.

In case of contact with eyes, hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.

In case of skin contact, immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

5. Fire Fighting Measures

Flash Pt:	No data.
Explosive Limits:	LEL: No data. UEL: No data.
Autoignition Pt:	No data available.
Fire Fighting Instructions:	As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.
Flammable Properties and Hazards:	Emits toxic fumes under fire conditions.
Hazardous Combustion Products:	No data available.
Suitable Extinguishing Media:	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.
Unsuitable Extinguishing Media:	A solid water stream may be inefficient.

6. Accidental Release Measures

Steps To Be Taken In Case Material Is Released Or Spilled:	Avoid release into the environment. Avoid breathing vapors and provide adequate ventilation. As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves). Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.
---	---

7. Handling and Storage

Hazard Label Information:	Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling
Precautions To Be Taken in Handling:	Avoid breathing (dust, vapor, mist, gas). Avoid prolonged or repeated exposure.
Precautions To Be Taken in Storing:	Keep tightly closed. Store at correct temperature.

8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TWA	Other Limits
1. HIF-1.alpha. (C-Term) Polyclonal Antibody	NA	No data.	No data.	No data.
2. Glycerol	56-81-5	PEL: 15 (dust); 5 (resp.) mg/m3	TLV: 10 mg/m3	No data.
3. Bovine Serum Albumin (BSA)	9048-46-8	No data.	No data.	No data.
4. Sodium azide	26628-22-8	No data.	CEIL: 0.29 mg/m3	No data.
5. Sodium chloride	7647-14-5	No data.	No data.	No data.
6. Trizma base	77-86-1	No data.	No data.	No data.
7. Water	7732-18-5	No data.	No data.	No data.

Protective Equipment Summary - Hazard Label Information:	Compatible chemical-resistant gloves Safety glasses Eye wash station in work area Safety shower in work area Lab coat Safety glasses Vent Hood
Respiratory Equipment (Specify Type):	NIOSH approved respirator, as conditions warrant.
Eye Protection:	Safety glasses
Protective Gloves:	Compatible chemical-resistant gloves
Other Protective Clothing:	Lab coat
Engineering Controls (Ventilation etc.):	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
Work/Hygienic/Maintenance Practices:	Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower. Wash thoroughly after handling.

9. Physical and Chemical Properties

Physical States: [] Gas [X] Liquid [] Solid

Melting Point: No data.

Boiling Point: No data.

Autoignition Pt: No data.

Flash Pt: No data.

Specific Gravity (Water = 1): No data.

Vapor Pressure (vs. Air or mm Hg): No data.

Vapor Density (vs. Air = 1): No data.

Evaporation Rate: No data.

Solubility in Water: No data.

Percent Volatile: No data.

pH: 7.4

Appearance and Odor: No data available.

10. Stability and Reactivity

Stability: Unstable [] Stable [X]

Conditions To Avoid - Instability: No data available.

Incompatibility - Materials To Avoid: strong bases
strong oxidizing agents

Hazardous Decomposition Or Byproducts: carbon dioxide
carbon monoxide

Possibility of Hazardous Reactions: Will occur [] Will not occur [X]

Conditions To Avoid - Hazardous Reactions: No data available.

11. Toxicological Information

The toxicological effects of this product have not been thoroughly studied.

Chronic Toxicological Effects: No data available.

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. HIF-1.alpha. (C-Term) Polyclonal Antibody	NA	n.a.	n.a.	n.a.	n.a.
2. Glycerol	56-81-5	n.a.	n.a.	n.a.	n.a.
3. Bovine Serum Albumin (BSA)	9048-46-8	n.a.	n.a.	n.a.	n.a.
4. Sodium azide	26628-22-8	n.a.	n.a.	A4	n.a.
5. Sodium chloride	7647-14-5	n.a.	n.a.	n.a.	n.a.
6. Trizma base	77-86-1	n.a.	n.a.	n.a.	n.a.
7. Water	7732-18-5	n.a.	n.a.	n.a.	n.a.

12. Ecological Information

Avoid release into the environment.
 Runoff from fire control or dilution water may cause pollution.

13. Disposal Considerations

Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.



MATERIAL SAFETY DATA SHEET

HIF-1.alpha. (C-Term) Polyclonal Antibody

14. Transport Information

LAND TRANSPORT (US DOT)

DOT Proper Shipping Name Not dangerous goods.

LAND TRANSPORT (European ADR/RID)

ADR/RID Shipping Name Not dangerous goods.

AIR TRANSPORT (ICAO/IATA)

ICAO/IATA Shipping Name Not dangerous goods.

Additional Transport Information: Transport in accordance with local, state, and federal regulations.

15. Regulatory Information

European Community Hazard Symbol codes

No data available.

European Community Risk and Safety Phrases

S24/25 - Avoid contact with skin and eyes.

S37/39 - Wear suitable gloves and eye/face protection.

US EPA SARA Title III

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. HIF-1.alpha. (C-Term) Polyclonal Antibody	NA	No	No	No	No
2. Glycerol	56-81-5	No	No	No	No
3. Bovine Serum Albumin (BSA)	9048-46-8	No	No	No	No
4. Sodium azide	26628-22-8	Yes 500 LB	Yes 1000 LB	Yes	No
5. Sodium chloride	7647-14-5	No	No	No	No
6. Trizma base	77-86-1	No	No	No	No
7. Water	7732-18-5	No	No	No	No

Other US EPA or State Lists

Hazardous Components (Chemical Name)	CAS #	CAA HAP,ODC	CWA NPDES	TSCA	CA PROP.65
1. HIF-1.alpha. (C-Term) Polyclonal Antibody	NA	No	No	No	No
2. Glycerol	56-81-5	No	No	Inventory	No
3. Bovine Serum Albumin (BSA)	9048-46-8	No	No	Inventory	No
4. Sodium azide	26628-22-8	No	No	Inventory	No
5. Sodium chloride	7647-14-5	No	No	Inventory	No
6. Trizma base	77-86-1	No	No	Inventory	No
7. Water	7732-18-5	No	No	Inventory	No

Regulatory Information Statement:

This SDS was prepared in accordance with Regulation (EC) No.1272/2008 and European Directive 67/548/EEC as amended.

16. Other Information

Company Policy or Disclaimer

For research use only, not for human or veterinary use.

DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

N.A.=Not available, N.P.=Not applicable, N.D.=Not determined, N.E.=Not established, N.R.=Not required