

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

Revision: 02/08/2013  
Supersedes Revision: 12/03/2008

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

**Product Code:** 700121  
**Product Name:** LSD1 Assay Buffer (10X)  
**Intended Use:** For research use only, not for human or veterinary use.  
**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

## 2. Hazards Identification

**GHS Hazard Phrases:** Based on evaluation of currently available data this substance or mixture is not classifiable according to GHS.  
**GHS Precaution Phrases:** No data available.  
**GHS Response Phrases:** No data available.  
**GHS Storage and Disposal Phrases:** Please refer to Section 7 for Storage and Section 13 for Disposal information.  
**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.  
**Target Organs:** No data available.  
**Signs and Symptoms Of Exposure:** 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. HEPES, free acid	7365-45-9	11.9 %	230-907-9	No phrases apply.	TL6809000
2. Water	7732-18-5	88.1 %	231-791-2	No phrases apply.	ZC0110000

## 4. First Aid Measures

**Emergency and First Aid Procedures:**

**In Case of Inhalation:** Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

**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.

**In Case of Eye Contact:** 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 Ingestion:** 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.

**Indication of any immediate medical attention and special treatment needed:** No data available.

### 5. Fire Fighting Measures

**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.

**Flammable Properties and Hazards:** No data available.

**Flash Pt:** No data.

**Autoignition Pt:** No data available.

**Explosive Limits:** LEL: No data. UEL: No data.

**Hazardous Combustion Products:** 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.

### 6. Accidental Release Measures

**Protective Precautions, Protective Equipment and Emergency Procedures:** 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).

**Environmental Precautions:** Take steps to avoid release into the environment, if safe to do so.

**Steps To Be Taken In Case Material Is Released Or Spilled:** Contain spill and collect, as appropriate.  
Transfer to a chemical waste container for disposal in accordance with local regulations.

### 7. Handling and Storage

**Precautions To Be Taken in Handling:** Avoid breathing dust/fume/gas/mist/vapours/spray.  
Avoid prolonged or repeated exposure.

**Precautions To Be Taken in Storing:** Keep container tightly closed.  
Store in accordance with information listed on the product insert.

**Hazard Label Information:** Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation.  
Wash thoroughly after handling.

### 8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits
1. HEPES, free acid	7365-45-9	No data.	No data.	No data.
2. Water	7732-18-5	No data.	No data.	No data.
Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe
1. HEPES, free acid	7365-45-9	No data.	No data.	No data.
2. Water	7732-18-5	No data.	No data.	No data.

**Protective Equipment Summary - Hazard Label Information:** Compatible chemical-resistant gloves    Eye wash station in work area    Lab coat    Safety glasses    Safety shower in work area    Vent Hood

**Engineering Controls (Ventilation etc.):** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

**Eye Protection:** Safety glasses

**Protective Gloves:** Compatible chemical-resistant gloves

**Other Protective Clothing:** Lab coat

**Respiratory Equipment (Specify Type):** NIOSH approved respirator, as conditions warrant.

**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.

Environmental Exposure Controls: No data available.

## 9. Physical and Chemical Properties

### Information on Basic Physical and Chemical Properties

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

Appearance and Odor: No data available.

pH: 7.5

Melting Point: No data.

Boiling Point: No data.

Flash Pt: No data.

Evaporation Rate: No data.

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

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

Specific Gravity (Water = 1): No data.

Solubility in Water: No data.

Autoignition Pt: No data.

Explosive Properties: No data available.

Oxidizing Properties: No data available.

### Other Information

Percent Volatile: No data.

## 10. Stability and Reactivity

Reactivity: No data available.

Stability: Unstable [ ] Stable [ X ]

Stability Note(s): Stable if stored in accordance with information listed on the product insert.

Conditions To Avoid: No data available.

Polymerization: Will occur [ ] Will not occur [ X ]

Incompatibility - Materials To Avoid: strong oxidizing agents

Hazardous Decomposition Or Byproducts: carbon dioxide  
carbon monoxide  
nitrogen oxides  
sulfur oxides

## 11. Toxicological Information

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. HEPES, free acid	7365-45-9	n.a.	n.a.	n.a.	n.a.
2. Water	7732-18-5	n.a.	n.a.	n.a.	n.a.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

## 12. Ecological Information

General 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.

### 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. HEPES, free acid	7365-45-9	No	No	No	No
2. 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. HEPES, free acid	7365-45-9	No	No	Inventory	No
2. Water	7732-18-5	No	No	Inventory	No

**Regulatory Information Statement:** This SDS was prepared in accordance with 29 CFR 1910.1200, Regulation (EC) No.1272/2008, and European Directive 67/548/EEC as amended.

### 16. Other Information

**Revision Date:** 02/08/2013

**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



## LSD1 (human recombinant) Assay Reagent

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

Revision: 02/08/2013  
Supersedes Revision: 12/04/2008

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

**Product Code:** 700122

**Product Name:** LSD1 (human recombinant) Assay Reagent

**Intended Use:** For research use only, not for human or veterinary use.

**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

## 2. Hazards Identification

**GHS Hazard Phrases:** Based on evaluation of currently available data this substance or mixture is not classifiable according to GHS.

**GHS Precaution Phrases:** No data available.

**GHS Response Phrases:** No data available.

**GHS Storage and Disposal Phrases:** Please refer to Section 7 for Storage and Section 13 for Disposal information.

**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.

**Target Organs:** No data available.

**Signs and Symptoms Of Exposure:** 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. LSD1 (human recombinant)	NA	0.0 -5.0 %	NA	No phrases apply.	NA
2. Sodium phosphate monobasic, monohydrate	10049-21-5	< 1.0 %	NA	R36/37/38	WA1900000
3. Water	7732-18-5	>94.0 %	231-791-2	No phrases apply.	ZC0110000

## 4. First Aid Measures

### Emergency and First Aid Procedures:

**In Case of Inhalation:** Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

**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.

**In Case of Eye Contact:** 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 Ingestion:** 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.

**LSD1 (human recombinant) Assay Reagent**

Revision: 02/08/2013

Supercedes Revision: 12/04/2008

**Indication of any immediate medical attention and special treatment needed:** No data available.

**5. Fire Fighting Measures**

**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.

**Flammable Properties and Hazards:** No data available.

**Flash Pt:** No data.

**Autoignition Pt:** No data available.

**Explosive Limits:** LEL: No data. UEL: No data.

**Hazardous Combustion Products:** 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.

**6. Accidental Release Measures**

**Protective Precautions, Protective Equipment and Emergency Procedures:** 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).

**Environmental Precautions:** Take steps to avoid release into the environment, if safe to do so.

**Steps To Be Taken In Case Material Is Released Or Spilled:** Contain spill and collect, as appropriate.  
Transfer to a chemical waste container for disposal in accordance with local regulations.

**7. Handling and Storage**

**Precautions To Be Taken in Handling:** Avoid breathing dust/fume/gas/mist/vapours/spray.  
Avoid prolonged or repeated exposure.

**Precautions To Be Taken in Storing:** Keep container tightly closed.  
Store in accordance with information listed on the product insert.

**Hazard Label Information:** Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation.  
Wash thoroughly after handling.

**8. Exposure Controls/Personal Protection**

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits
1. LSD1 (human recombinant)	NA	No data.	No data.	No data.
2. Sodium phosphate monobasic, monohydrate	10049-21-5	No data.	No data.	No data.
3. Water	7732-18-5	No data.	No data.	No data.
Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe
1. LSD1 (human recombinant)	NA	No data.	No data.	No data.
2. Sodium phosphate monobasic, monohydrate	10049-21-5	No data.	No data.	No data.
3. Water	7732-18-5	No data.	No data.	No data.

**Protective Equipment Summary - Hazard Label Information:** Compatible chemical-resistant gloves Eye wash station in work area Lab coat Safety glasses Safety shower in work area Vent Hood

**Engineering Controls (Ventilation etc.):** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

**Eye Protection:** Safety glasses

**Protective Gloves:** Compatible chemical-resistant gloves

**Other Protective Clothing:** Lab coat

**Respiratory Equipment (Specify Type):** NIOSH approved respirator, as conditions warrant.

**LSD1 (human recombinant) Assay Reagent**

Revision: 02/08/2013

Supercedes Revision: 12/04/2008

**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.

**Environmental Exposure Controls:** No data available.

**9. Physical and Chemical Properties****Information on Basic Physical and Chemical Properties**

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

**Appearance and Odor:** No data available.

**pH:** 7.2

**Melting Point:** No data.

**Boiling Point:** No data.

**Flash Pt:** No data.

**Evaporation Rate:** No data.

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

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

**Specific Gravity (Water = 1):** No data.

**Solubility in Water:** No data.

**Autoignition Pt:** No data.

**Explosive Properties:** No data available.

**Oxidizing Properties:** No data available.

**Other Information**

**Percent Volatile:** No data.

**10. Stability and Reactivity**

**Reactivity:** No data available.

**Stability:** Unstable [ ] Stable [ X ]

**Stability Note(s):** Stable if stored in accordance with information listed on the product insert.

**Conditions To Avoid:** No data available.

**Polymerization:** Will occur [ ] Will not occur [ X ]

**Incompatibility - Materials To Avoid:** No data available.

**Hazardous Decomposition Or Byproducts:** No data available.

**11. Toxicological Information**

**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. LSD1 (human recombinant)	NA	n.a.	n.a.	n.a.	n.a.
2. Sodium phosphate monobasic, monohydrate	10049-21-5	n.a.	n.a.	n.a.	n.a.
3. Water	7732-18-5	n.a.	n.a.	n.a.	n.a.

**Carcinogenicity:** NTP? No IARC Monographs? No OSHA Regulated? No



## LSD1 (human recombinant) Assay Reagent

Revision: 02/08/2013

Supercedes Revision: 12/04/2008

## 12. Ecological Information

**General 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.

## 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. LSD1 (human recombinant)	NA	No	No	No	No
2. Sodium phosphate monobasic, monohydrate	10049-21-5	No	No	No	No
3. 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. LSD1 (human recombinant)	NA	No	No	No	No
2. Sodium phosphate monobasic, monohydrate	10049-21-5	No	No	No	No
3. Water	7732-18-5	No	No	Inventory	No

**Regulatory Information Statement:** This SDS was prepared in accordance with 29 CFR 1910.1200, Regulation (EC) No.1272/2008, and European Directive 67/548/EEC as amended.

## 16. Other Information

**Revision Date:** 02/08/2013

## 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



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



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

**Product Code:** 700123

**Product Name:** LSD1 Assay Fluorometric Substrate

**Intended Use:** For research use only, not for human or veterinary use.

**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

### 2. Hazards Identification

GHS Classification	Placard	Key word	GHS Hazard
Acute Toxicity: Oral, Category 4	Exclamation point	Warning	Harmful if swallowed
<b>GHS Hazard Phrases:</b> H302: Harmful if swallowed.			
<b>GHS Precaution Phrases:</b> P264: Wash hands thoroughly after handling.			
<b>GHS Response Phrases:</b> P301+312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. P330: Rinse mouth.			
<b>GHS Storage and Disposal Phrases:</b> Please refer to Section 7 for Storage and Section 13 for Disposal information.			
<b>Route(s) of Entry:</b> Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other: Injection			
<b>Potential Health Effects (Acute and Chronic):</b> Harmful if swallowed. Material may be irritating to the mucous membranes and upper respiratory tract. May be harmful by inhalation or skin absorption. May cause eye, skin, or respiratory system irritation.			
<b>Target Organs:</b> No data available.			
<b>Signs and Symptoms Of Exposure:</b> To the best of our knowledge, the toxicological properties have not been thoroughly investigated.			
<b>Medical Conditions Generally Aggravated By Exposure:</b> No data available.			

### 3. Composition/Information on Ingredients

Hazardous Components (Chemical Name)	CAS #	Concentration	EC#	Risk Phrases
1. 10-Acetyl-3,7-dihydroxyphenoxazine (ADHP)	119171-73-2	100.0 %	NA	R22

### 4. First Aid Measures

**Emergency and First Aid Procedures:**

**In Case of Inhalation:** Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

**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.

**In Case of Eye Contact:** Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.

<b>In Case of Ingestion:</b>	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.
<b>Indication of any immediate medical attention and special treatment needed:</b>	No data available.

### 5. Fire Fighting Measures

<b>Suitable Extinguishing Media:</b>	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.
<b>Unsuitable Extinguishing Media:</b>	A solid water stream may be inefficient.
<b>Flammable Properties and Hazards:</b>	No data available.
<b>Flash Pt:</b>	No data.
<b>Autoignition Pt:</b>	No data available.
<b>Explosive Limits:</b>	LEL: No data. <span style="margin-left: 150px;">UEL: No data.</span>
<b>Hazardous Combustion Products:</b>	No data available.
<b>Fire Fighting Instructions:</b>	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.

### 6. Accidental Release Measures

<b>Protective Precautions, Protective Equipment and Emergency Procedures:</b>	Avoid raising and breathing dust, 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).
<b>Environmental Precautions:</b>	Take steps to avoid release into the environment, if safe to do so.
<b>Steps To Be Taken In Case Material Is Released Or Spilled:</b>	Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

### 7. Handling and Storage

<b>Precautions To Be Taken in Handling:</b>	Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.
<b>Precautions To Be Taken in Storing:</b>	Keep container tightly closed. Store in accordance with information listed on the product insert.
<b>Hazard Label Information:</b>	Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.

### 8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits
1. 10-Acetyl-3,7-dihydroxyphenoxazine (ADHP)	119171-73-2	No data.	No data.	No data.
Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe
1. 10-Acetyl-3,7-dihydroxyphenoxazine (ADHP)	119171-73-2	No data.	No data.	No data.

<b>Protective Equipment Summary - Hazard Label Information:</b>	Compatible chemical-resistant gloves    Eye wash station in work area    Lab coat    Safety glasses    Safety shower in work area    Vent Hood
<b>Engineering Controls (Ventilation etc.):</b>	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
<b>Eye Protection:</b>	Safety glasses
<b>Protective Gloves:</b>	Compatible chemical-resistant gloves
<b>Other Protective Clothing:</b>	Lab coat
<b>Respiratory Equipment (Specify Type):</b>	NIOSH approved respirator, as conditions warrant.

**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.

**Environmental Exposure Controls:** No data available.

### 9. Physical and Chemical Properties

**Information on Basic Physical and Chemical Properties**

**Physical States:**  Gas  Liquid  Solid

**Appearance and Odor:** A lyophilized powder

**Melting Point:** No data.

**Boiling Point:** No data.

**Flash Pt:** No data.

**Evaporation Rate:** No data.

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

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

**Specific Gravity (Water = 1):** No data.

**Solubility in Water:** No data.

**Autoignition Pt:** No data.

**Explosive Properties:** No data available.

**Oxidizing Properties:** No data available.

**Other Information**

**Percent Volatile:** No data.

### 10. Stability and Reactivity

**Reactivity:** No data available.

**Stability:** Unstable  Stable

**Stability Note(s):** Stable if stored in accordance with information listed on the product insert.

**Conditions To Avoid:** No data available.

**Polymerization:** Will occur  Will not occur

**Incompatibility - Materials To Avoid:** strong oxidizing agents

**Hazardous Decomposition Or Byproducts:** carbon dioxide  
 carbon monoxide  
 nitrogen oxides

### 11. Toxicological Information

**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. 10-Acetyl-3,7-dihydroxyphenoxazine (ADHP)	119171-73-2	n.a.	n.a.	n.a.	n.a.

### 12. Ecological Information

**General Ecological Information:** Avoid release into the environment.  
 Runoff from fire control or dilution water may cause pollution.



# SAFETY DATA SHEET

## LSD1 Assay Fluorometric Substrate

### 13. Disposal Considerations

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

### 14. Transport Information

**Globally Harmonized System of Classification and Labelling**

Acute Toxicity: Oral, Category 4 - Warning! Harmful if swallowed

**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** Xn: Harmful

**European Community Risk and Safety Phrases**

- R22 - Harmful if swallowed.
- S22 - Do not breathe dust.
- S24/25 - Avoid contact with skin and eyes.
- S36/37/39 - Wear suitable protective clothing, 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. 10-Acetyl-3,7-dihydroxyphenoxazine (ADHP)	119171-73-2	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. 10-Acetyl-3,7-dihydroxyphenoxazine (ADHP)	119171-73-2	No	No	No	No

**Regulatory Information Statement:** This SDS was prepared in accordance with 29 CFR 1910.1200, Regulation (EC) No.1272/2008, and European Directive 67/548/EEC as amended.

### 16. Other Information

**Revision Date:** 02/08/2013

**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

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



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

**Product Code:** 700124  
**Product Name:** LSD1 Assay Horseradish Peroxidase  
**Intended Use:** For research use only, not for human or veterinary use.

**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

### 2. Hazards Identification

GHS Classification	Placard	Key word	GHS Hazard
Respiratory Sensitization, Category 1	Health hazard	Danger	May cause allergy or asthma symptoms or breathing difficulties if inhaled
Skin Sensitization, Category 1	Exclamation point	Warning	May cause an allergic skin reaction

**GHS Hazard Phrases:**  
 H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled  
 H317: May cause an allergic skin reaction

**GHS Precaution Phrases:**  
 P261: Avoid breathing dust/fume/gas/mist/vapours/spray.  
 P272: Contaminated work clothing should not be allowed out of the workplace.  
 P280: Wear protective gloves/clothing and eye/face protection as specified by the manufacturer/supplier or the competent authority.

**GHS Response Phrases:**  
 P304+341: IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.  
 P342+311: If experiencing respiratory symptoms call a POISON CENTER or doctor/physician.  
 P302+352: IF ON SKIN: Wash with plenty of soap and water.  
 P333+313: If skin irritation or rash occurs, seek medical advice/attention.  
 P363: Wash contaminated clothing before reuse.

**GHS Storage and Disposal Phrases:**  
 Please refer to Section 7 for Storage and Section 13 for Disposal information.

**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 allergic skin reaction.  
 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 May cause eye, skin, or respiratory system irritation.

**Target Organs:**  
 No data available.

**Signs and Symptoms Of Exposure:**  
 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
1. Horseradish peroxidase Type IV	9003-99-0	100.0 %	232-668-6	R42/43

### 4. First Aid Measures

**Emergency and First Aid Procedures:**

<b>In Case of Inhalation:</b>	Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
<b>In Case of Skin Contact:</b>	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.
<b>In Case of Eye Contact:</b>	Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.
<b>In Case of Ingestion:</b>	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.
<b>Indication of any immediate medical attention and special treatment needed:</b>	No data available.

### 5. Fire Fighting Measures

<b>Suitable Extinguishing Media:</b>	Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.
<b>Unsuitable Extinguishing Media:</b>	A solid water stream may be inefficient.
<b>Flammable Properties and Hazards:</b>	No data available.
<b>Flash Pt:</b>	No data.
<b>Autoignition Pt:</b>	No data available.
<b>Explosive Limits:</b>	LEL: No data. <span style="margin-left: 100px;">UEL: No data.</span>
<b>Hazardous Combustion Products:</b>	No data available.
<b>Fire Fighting Instructions:</b>	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.

### 6. Accidental Release Measures

<b>Protective Precautions, Protective Equipment and Emergency Procedures:</b>	Avoid raising and breathing dust, 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).
<b>Environmental Precautions:</b>	Take steps to avoid release into the environment, if safe to do so.
<b>Steps To Be Taken In Case Material Is Released Or Spilled:</b>	Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

### 7. Handling and Storage

<b>Precautions To Be Taken in Handling:</b>	Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.
<b>Precautions To Be Taken in Storing:</b>	Keep container tightly closed. Store in accordance with information listed on the product insert.
<b>Hazard Label Information:</b>	Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.

### 8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits
1. Horseradish peroxidase Type IV	9003-99-0	No data.	No data.	No data.
Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe
1. Horseradish peroxidase Type IV	9003-99-0	No data.	No data.	No data.
<b>Protective Equipment Summary - Hazard Label Information:</b>	Compatible chemical-resistant gloves    Eye wash station in work area    Lab coat    Safety glasses    Safety shower in work area    Vent Hood			
<b>Engineering Controls (Ventilation etc.):</b>	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.			
<b>Eye Protection:</b>	Safety glasses			
<b>Protective Gloves:</b>	Compatible chemical-resistant gloves			
<b>Other Protective Clothing:</b>	Lab coat			
<b>Respiratory Equipment (Specify Type):</b>	NIOSH approved respirator, as conditions warrant.			
<b>Work/Hygienic/Maintenance Practices:</b>	Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower. Wash thoroughly after handling.			
<b>Environmental Exposure Controls:</b>	No data available.			

### 9. Physical and Chemical Properties

**Information on Basic Physical and Chemical Properties**

<b>Physical States:</b>	[ ] Gas    [ ] Liquid    [ X ] Solid
<b>Appearance and Odor:</b>	A lyophilized powder
<b>Melting Point:</b>	No data.
<b>Boiling Point:</b>	No data.
<b>Flash Pt:</b>	No data.
<b>Evaporation Rate:</b>	No data.
<b>Vapor Pressure (vs. Air or mm Hg):</b>	No data.
<b>Vapor Density (vs. Air = 1):</b>	No data.
<b>Specific Gravity (Water = 1):</b>	No data.
<b>Solubility in Water:</b>	No data.
<b>Autoignition Pt:</b>	No data.
<b>Explosive Properties:</b>	No data available.
<b>Oxidizing Properties:</b>	No data available.
<b>Other Information</b>	
<b>Percent Volatile:</b>	No data.

### 10. Stability and Reactivity

<b>Reactivity:</b>	No data available.
<b>Stability:</b>	Unstable [ ]    Stable [ X ]
<b>Stability Note(s):</b>	Stable if stored in accordance with information listed on the product insert.
<b>Conditions To Avoid:</b>	No data available.
<b>Polymerization:</b>	Will occur [ ]    Will not occur [ X ]
<b>Incompatibility - Materials To Avoid:</b>	strong oxidizing agents





# SAFETY DATA SHEET

## LSD1 Assay Horseradish Peroxidase

**Hazardous Decomposition Or Byproducts:** No data available.

### 11. Toxicological Information

**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. Horseradish peroxidase Type IV	9003-99-0	n.a.	n.a.	n.a.	n.a.

### 12. Ecological Information

**General 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.

### 14. Transport Information

**Globally Harmonized System of Classification and Labelling**

Respiratory Sensitization, Category 1 - Danger! May cause allergy or asthma symptoms or breathing difficulties if inhaled

Skin Sensitization, Category 1 - Warning! May cause an allergic skin reaction

**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** Xn: Harmful

**European Community Risk and Safety Phrases**

R42/43 - May cause sensitization by inhalation and skin contact.

S22 - Do not breathe dust.

S24/25 - Avoid contact with skin and eyes.

S36/37/39 - Wear suitable protective clothing, 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. Horseradish peroxidase Type IV	9003-99-0	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. Horseradish peroxidase Type IV	9003-99-0	No	No	Inventory	No

**Regulatory Information Statement:** This SDS was prepared in accordance with 29 CFR 1910.1200, Regulation (EC) No.1272/2008, and European Directive 67/548/EEC as amended.

### 16. Other Information

**Revision Date:** 02/08/2013

**Company Policy or Disclaimer**

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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





# SAFETY DATA SHEET

## LSD1 Assay Peptide

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

Revision: 02/08/2013  
Supersedes Revision: 12/03/2008

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

**Product Code:** 700125

**Product Name:** LSD1 Assay Peptide

**Intended Use:** For research use only, not for human or veterinary use.

**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

### 2. Hazards Identification

**GHS Hazard Phrases:** Based on evaluation of currently available data this substance or mixture is not classifiable according to GHS.

**GHS Precaution Phrases:** No data available.

**GHS Response Phrases:** No data available.

**GHS Storage and Disposal Phrases:** Please refer to Section 7 for Storage and Section 13 for Disposal information.

**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.

**Target Organs:** No data available.

**Signs and Symptoms Of Exposure:** 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. LSD1 Peptide	NA	0.228 %	NA	No phrases apply.	NA
2. HEPES, free acid	7365-45-9	1.19 %	230-907-9	No phrases apply.	TL6809000
3. Water	7732-18-5	98.582 %	231-791-2	No phrases apply.	ZC0110000

### 4. First Aid Measures

**Emergency and First Aid Procedures:**

**In Case of Inhalation:** Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

**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.

**In Case of Eye Contact:** 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 Ingestion:** 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.

**Indication of any immediate medical attention and special treatment needed:** No data available.

### 5. Fire Fighting Measures

**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.

**Flammable Properties and Hazards:** No data available.

**Flash Pt:** No data.

**Autoignition Pt:** No data available.

**Explosive Limits:** LEL: No data. UEL: No data.

**Hazardous Combustion Products:** 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.

### 6. Accidental Release Measures

**Protective Precautions, Protective Equipment and Emergency Procedures:** 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).

**Environmental Precautions:** Take steps to avoid release into the environment, if safe to do so.

**Steps To Be Taken In Case Material Is Released Or Spilled:** Contain spill and collect, as appropriate.  
Transfer to a chemical waste container for disposal in accordance with local regulations.

### 7. Handling and Storage

**Precautions To Be Taken in Handling:** Avoid breathing dust/fume/gas/mist/vapours/spray.  
Avoid prolonged or repeated exposure.

**Precautions To Be Taken in Storing:** Keep container tightly closed.  
Store in accordance with information listed on the product insert.

**Hazard Label Information:** Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation.  
Wash thoroughly after handling.

### 8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits
1. LSD1 Peptide	NA	No data.	No data.	No data.
2. HEPES, free acid	7365-45-9	No data.	No data.	No data.
3. Water	7732-18-5	No data.	No data.	No data.
Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe
1. LSD1 Peptide	NA	No data.	No data.	No data.
2. HEPES, free acid	7365-45-9	No data.	No data.	No data.
3. Water	7732-18-5	No data.	No data.	No data.

**Protective Equipment Summary - Hazard Label Information:** Compatible chemical-resistant gloves Eye wash station in work area Lab coat Safety glasses Safety shower in work area Vent Hood

**Engineering Controls (Ventilation etc.):** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

**Eye Protection:** Safety glasses

**Protective Gloves:** Compatible chemical-resistant gloves

**Other Protective Clothing:** Lab coat

**Respiratory Equipment (Specify Type):** NIOSH approved respirator, as conditions warrant.

**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.

**Environmental Exposure Controls:** No data available.

## 9. Physical and Chemical Properties

### Information on Basic Physical and Chemical Properties

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

**Appearance and Odor:** No data available.

**pH:** 7.5

**Melting Point:** No data.

**Boiling Point:** No data.

**Flash Pt:** No data.

**Evaporation Rate:** No data.

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

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

**Specific Gravity (Water = 1):** No data.

**Solubility in Water:** No data.

**Autoignition Pt:** No data.

**Explosive Properties:** No data available.

**Oxidizing Properties:** No data available.

**Other Information**

**Percent Volatile:** No data.

## 10. Stability and Reactivity

**Reactivity:** No data available.

**Stability:** Unstable [ ] Stable [ X ]

**Stability Note(s):** Stable if stored in accordance with information listed on the product insert.

**Conditions To Avoid:** No data available.

**Polymerization:** Will occur [ ] Will not occur [ X ]

**Incompatibility - Materials To Avoid:** strong oxidizing agents

**Hazardous Decomposition Or Byproducts:** carbon dioxide  
carbon monoxide  
nitrogen oxides  
sulfur oxides

## 11. Toxicological Information

**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. LSD1 Peptide	NA	n.a.	n.a.	n.a.	n.a.
2. HEPES, free acid	7365-45-9	n.a.	n.a.	n.a.	n.a.
3. Water	7732-18-5	n.a.	n.a.	n.a.	n.a.

**Carcinogenicity:** NTP? No IARC Monographs? No OSHA Regulated? No



# SAFETY DATA SHEET

## LSD1 Assay Peptide

### 12. Ecological Information

**General 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.

### 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. LSD1 Peptide	NA	No	No	No	No
2. HEPES, free acid	7365-45-9	No	No	No	No
3. 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. LSD1 Peptide	NA	No	No	No	No
2. HEPES, free acid	7365-45-9	No	No	Inventory	No
3. Water	7732-18-5	No	No	Inventory	No

**Regulatory Information Statement:** This SDS was prepared in accordance with 29 CFR 1910.1200, Regulation (EC) No.1272/2008, and European Directive 67/548/EEC as amended.

### 16. Other Information

**Revision Date:** 02/08/2013

**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

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



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

**Product Code:** 700126

**Product Name:** LSD1 Assay DMSO

**Intended Use:** For research use only, not for human or veterinary use.

**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

### 2. Hazards Identification

GHS Classification	Placard	Key word	GHS Hazard
Serious Eye Damage/Eye Irritation, Category 2A	Exclamation point	Warning	Causes serious eye irritation
Skin Corrosion/Irritation, Category 2	Exclamation point	Warning	Causes skin irritation
Flammable Liquids, Category 4	none	Warning	Combustible liquid

**GHS Hazard Phrases:**  
 H319: Causes serious eye irritation  
 H315: Causes skin irritation.  
 H227: Combustible liquid.

**GHS Precaution Phrases:**  
 P264: Wash hands thoroughly after handling.  
 P280: Wear protective gloves/clothing and eye/face protection as specified by the manufacturer/supplier or the competent authority.  
 P210: Keep away from {heat/sparks/open flames/hot surfaces}. - No smoking.

**GHS Response Phrases:**  
 P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P337+313: If eye irritation persists, get medical advice/attention.  
 P302+352: IF ON SKIN: Wash with plenty of soap and water.  
 P332+313: If skin irritation occurs, get medical advice/attention.  
 P362: Take off contaminated clothing and wash before re-use.

**GHS Storage and Disposal Phrases:**  
 Please refer to Section 7 for Storage and Section 13 for Disposal information.

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

**Potential Health Effects (Acute and Chronic):**  
 Causes eye and skin irritation.  
 DMSO has the potential to carry toxic materials or materials of unknown toxicity into the body.  
 DMSO is readily absorbed through skin.  
 Material may be irritating to the mucous membranes and upper respiratory tract.  
 May be harmful by inhalation, ingestion, or skin absorption.  
 May cause respiratory system irritation.

**Target Organs:**  
 Eyes, Reproductive system, Kidneys, Respiratory system, Liver, Skin.

**LD 50 / LC 50:**  
 Please refer to Section 11.

**Signs and Symptoms Of Exposure:**  
 Exposure may cause: hematuria or shortness of breath (dyspnea).  
 Exposure may cause: gastrointestinal irritation with nausea, vomiting, diarrhea, headache, dizziness, and drowsiness.  
 Eye contact may cause blurry vision, burning sensation, redness, tearing, and vasodilation.

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. Dimethyl sulfoxide, anhydrous	67-68-5	100.0 %	200-664-3	R36/38	PV6210000

### 4. First Aid Measures

**Emergency and First Aid Procedures:**

**In Case of Inhalation:** Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.

**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.

**In Case of Eye Contact:** 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 Ingestion:** 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.

**Indication of any immediate medical attention and special treatment needed:** No data available.

### 5. Fire Fighting Measures

**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.

**Flammable Properties and Hazards:** Can release vapors that form explosive mixtures at temperatures at or above the flashpoint. Container explosion may occur under fire conditions. Emits toxic fumes under fire conditions. Sensitive to static discharge. Vapors can travel to a source of ignition and flash back.

**Flash Pt:** 89.00 C Method Used: Closed Cup

**Autoignition Pt:** 215.00 C

**Explosive Limits:** LEL: 3.5% at 25.0 C UEL: 42.0% at 25.0 C

**Hazardous Combustion Products:** 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.  
Note: Combustible as diluted in dimethyl sulfoxide

### 6. Accidental Release Measures

**Protective Precautions, Protective Equipment and Emergency Procedures:** 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).

**Environmental Precautions:** Take steps to avoid release into the environment, if safe to do so.

**Steps To Be Taken In Case Material Is Released Or Spilled:** Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

### 7. Handling and Storage

<b>Precautions To Be Taken in Handling:</b>	Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure. Keep away from sources of ignition. Take precautionary measures against static discharge.
<b>Precautions To Be Taken in Storing:</b>	Keep away from heat, sparks and flame. Keep container tightly closed. Store in accordance with information listed on the product insert.
<b>Other Precautions:</b>	Hygroscopic.
<b>Hazard Label Information:</b>	Avoid contact with skin and eyes. Do not reuse this container. Use with adequate ventilation. Wash thoroughly after handling.

### 8. Exposure Controls/Personal Protection

Hazardous Components (Chemical Name)	CAS #	OSHA PEL	ACGIH TLV	Other Limits
1. Dimethyl sulfoxide, anhydrous	67-68-5	No data.	No data.	No data.
Hazardous Components (Chemical Name)	CAS #	Britain EH40	France VL	Europe
1. Dimethyl sulfoxide, anhydrous	67-68-5	No data.	No data.	No data.

<b>Protective Equipment Summary - Hazard Label Information:</b>	Compatible chemical-resistant gloves    Eye wash station in work area    Lab coat    Safety glasses    Safety shower in work area    Vent Hood
<b>Engineering Controls (Ventilation etc.):</b>	Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
<b>Eye Protection:</b>	Safety glasses
<b>Protective Gloves:</b>	Compatible chemical-resistant gloves
<b>Other Protective Clothing:</b>	Lab coat
<b>Respiratory Equipment (Specify Type):</b>	NIOSH approved respirator, as conditions warrant.
<b>Work/Hygienic/Maintenance Practices:</b>	Do not take internally. Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower. Wash thoroughly after handling.
<b>Environmental Exposure Controls:</b>	No data available.

### 9. Physical and Chemical Properties

**Information on Basic Physical and Chemical Properties**

<b>Physical States:</b>	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid
<b>Appearance and Odor:</b>	No data available.
<b>Melting Point:</b>	No data.
<b>Boiling Point:</b>	No data.
<b>Flash Pt:</b>	89.00 C    Method Used: Closed Cup
<b>Evaporation Rate:</b>	No data.
<b>Explosive Limits:</b>	LEL: 3.5%    at 25.0 C    UEL: 42.0%    at 25.0 C
<b>Vapor Pressure (vs. Air or mm Hg):</b>	0.37 MM_HG    at 20.0 C
<b>Vapor Density (vs. Air = 1):</b>	No data.
<b>Specific Gravity (Water = 1):</b>	No data.
<b>Solubility in Water:</b>	No data.
<b>Autoignition Pt:</b>	215.00 C



**Explosive Properties:** No data available.

**Oxidizing Properties:** No data available.

**Other Information**

**Percent Volatile:** No data.

### 10. Stability and Reactivity

**Reactivity:** No data available.

**Stability:** Unstable [  ] Stable [  ]

**Stability Note(s):** Stable if stored in accordance with information listed on the product insert.

**Conditions To Avoid:** heat, flames and sparks

**Polymerization:** Will occur [  ] Will not occur [  ]

**Incompatibility - Materials To Avoid:** acid chlorides  
phosphorus halides  
strong acids  
alkali metals  
strong oxidizing agents  
strong reducing agents

**Hazardous Decomposition Or Byproducts:** carbon monoxide  
carbon dioxide  
sulfur oxides

### 11. Toxicological Information

**Toxicological Information:** The toxicological effects of this product have not been thoroughly studied.

DMSO - Toxicity Data: Oral LD50 (rat): 14,500 mg/kg; Skin LD50 (rat): 40,000 mg/kg; Oral LD50 (mouse): 7,920 mg/kg; Skin LD50 (mouse): 50,000 mg/kg; Skin TDLO (woman): 1,800 mg/kg; Inhalation LC50 (rat): >1,600 mg/m3 (4h);  
DMSO - Irritation Data: Eyes (rabbit): 100 mg mild; Skin (rabbit): 500 mg (24h) mild;

**Chronic Toxicological Effects:** DMSO - Investigated as a mutagen, reproductive effector, and tumorigen. Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information.  
DMSO RTECS Number: PV6210000

Hazardous Components (Chemical Name)	CAS #	NTP	IARC	ACGIH	OSHA
1. Dimethyl sulfoxide, anhydrous	67-68-5	n.a.	n.a.	n.a.	n.a.

**Carcinogenicity:** NTP? No IARC Monographs? No OSHA Regulated? No

### 12. Ecological Information

**General 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.

### 14. Transport Information

**Globally Harmonized System of Classification and Labelling**

Serious Eye Damage/Eye Irritation, Category 2A - Warning! Causes serious eye irritation  
Skin Corrosion/Irritation, Category 2 - Warning! Causes skin irritation  
Flammable Liquids, Category 4 - Warning! Combustible liquid

**LAND TRANSPORT (US DOT)**





# SAFETY DATA SHEET

## LSD1 Assay DMSO

<b>DOT Proper Shipping Name</b>	Not dangerous goods.
<b>LAND TRANSPORT (European ADR/RID)</b>	
<b>ADR/RID Shipping Name</b>	Not dangerous goods.
<b>AIR TRANSPORT (ICAO/IATA)</b>	
<b>ICAO/IATA Shipping Name</b>	Not dangerous goods.
<b>Additional Transport Information:</b>	Transport in accordance with local, state, and federal regulations.

### 15. Regulatory Information

**European Community Hazard Symbol codes** Xi: Irritant

**European Community Risk and Safety Phrases**

- R36/38 - Irritating to eyes and skin.
- S24/25 - Avoid contact with skin and eyes.
- S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.
- S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible.)

**US EPA SARA Title III**

Hazardous Components (Chemical Name)	CAS #	Sec.302 (EHS)	Sec.304 RQ	Sec.313 (TRI)	Sec.110
1. Dimethyl sulfoxide, anhydrous	67-68-5	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. Dimethyl sulfoxide, anhydrous	67-68-5	No	No	Inventory	No

**Regulatory Information Statement:** This SDS was prepared in accordance with 29 CFR 1910.1200, Regulation (EC) No.1272/2008, and European Directive 67/548/EEC as amended.

### 16. Other Information

**Revision Date:** 02/08/2013

**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