

according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

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

- 1.1 Product Code:** 600034
Product Name: Cell-Based Assay (-)-Nutlin-3 (10 mM)
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**
Relevant identified uses: For research use only, not for human or veterinary use.
- 1.3 Details of the Supplier of the Safety Data Sheet:**
- Company Name:** Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108
- Web site address:** www.caymanchem.com
- Information:** Cayman Chemical Company +1 (734)971-3335
- 1.4 Emergency telephone number:**
- Emergency Contact:** CHEMTREC Within USA and Canada: +1 (800)424-9300
CHEMTREC Outside USA and Canada: +1 (703)527-3887

Section 2. Hazards Identification

- 2.1 Classification of the Substance or Mixture:**
- 2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:**
Flammable Liquids, Category 4
Skin Corrosion/Irritation, Category 2
Serious Eye Damage/Eye Irritation, Category 2A
- 2.2 Label Elements:**
- 2.2.1 Labeling according to Regulation (EC) No 1272/2008 [CLP]:**



GHS Signal Word: Warning

GHS Hazard Phrases:

H227: Combustible liquid.

H315: Causes skin irritation.

H319: Causes serious eye irritation.

GHS Precaution Phrases:

P280: Wear {protective gloves/protective clothing/eye protection/face protection}.

P210: Keep away from {heat/sparks/open flames/hot surfaces}. - No smoking.

P264: Wash {hands} thoroughly after handling.

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

GHS Response Phrases:

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

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

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.

GHS Storage and Disposal Phrases:

Please refer to Section 7 for Storage and Section 13 for Disposal information.



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| | |
|---|--|
| 2.3 Adverse Human Health Effects and Symptoms: | Causes skin and serious eye 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. To the best of our knowledge, the toxicological properties have not been thoroughly investigated. |
|---|--|

Section 3. Composition/Information on Ingredients

| CAS # / RTECS # | Hazardous Components (Chemical Name)/ REACH Registration No. | Concentration | EC No./ EC Index No. | GHS Classification |
|----------------------|--|---------------|----------------------|---|
| NA NA | Cell-Based Assay (-)-Nutlin-3 (10 mM) | 0.582 % | NA NA | No data available. |
| 67-68-5 PV6210000 | Dimethyl sulfoxide, anhydrous | 99.418 % | 200-664-3 NA | Flam. Liq. 4: H227 Eye Damage 2A: H319 Skin Corr. 2: H315 |

Section 4. First Aid Measures

| | |
|--|---|
| 4.1 Description of First Aid Measures: | No data available. |
| 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 15 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 15 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. |
| 4.2 Important Symptoms and Effects, Both Acute and Delayed: | 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. |

Section 5. Fire Fighting Measures

| | |
|--|--|
| 5.1 Suitable Extinguishing Media: | Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. |
| Unsuitable Extinguishing Media: | A solid water stream may be inefficient. |
| 5.2 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 |
| Explosive Limits: | LEL: 3.5% at 25.0 C UEL: 42.0% at 25.0 C |
| Autoignition Pt: | 215.00 C |
| 5.3 Fire Fighting Instructions: | As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or |

Multi-region format

equivalent), and full protective gear to prevent contact with skin and eyes.

Note: Combustible as diluted in dimethyl sulfoxide

Section 6. Accidental Release Measures

- 6.1 Protective Precautions,** Avoid breathing vapors and provide adequate ventilation.
- Protective Equipment and** As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator,
- Emergency Procedures:** and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).
- 6.2 Environmental** Take steps to avoid release into the environment, if safe to do so.
- Precautions:**
- 6.3 Methods and Material For** Contain spill and collect, as appropriate.
- Containment and Cleaning** Transfer to a chemical waste container for disposal in accordance with local regulations.
- Up:**

Section 7. Handling and Storage

- 7.1 Precautions To Be Taken** Avoid breathing dust/fume/gas/mist/vapours/spray.
- in Handling:** Avoid prolonged or repeated exposure.
- Keep away from sources of ignition.
- Take precautionary measures against static discharge.
- 7.2 Precautions To Be Taken** Keep away from heat, sparks and flame.
- in Storing:** Keep container tightly closed.
- Store in accordance with information listed on the product insert.
- Other Precautions:** Hygroscopic.

Section 8. Exposure Controls/Personal Protection

8.1 Exposure Parameters:

| CAS # | Partial Chemical Name | Britain EH40 | France VL | Europe |
|---------|---------------------------------------|--------------|-----------|--------------|
| NA | Cell-Based Assay (-)-Nutlin-3 (10 mM) | No data. | No data. | No data. |
| 67-68-5 | Dimethyl sulfoxide, anhydrous | No data. | No data. | No data. |
| CAS # | Partial Chemical Name | OSHA TWA | ACGIH TWA | Other Limits |
| NA | Cell-Based Assay (-)-Nutlin-3 (10 mM) | No data. | No data. | No data. |
| 67-68-5 | Dimethyl sulfoxide, anhydrous | No data. | No data. | No data. |

8.2 Exposure Controls:

- 8.2.1 Engineering Controls** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
- (Ventilation etc.):**
- 8.2.2 Personal protection equipment:**
- Eye Protection:** Safety glasses
- Protective Gloves:** Compatible chemical-resistant gloves
- Other Protective Clothing:** Lab coat
- Respiratory Equipment** NIOSH approved respirator, as conditions warrant.
- (Specify Type):**
- Work/Hygienic/Maintenan** Do not take internally.
- ce Practices:** Facilities storing or utilizing this material should be equipped with an eyewash and a safety shower.
- Wash thoroughly after handling.
- No data available.



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Section 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Physical States: ☐ Gas ☒ Liquid ☐ Solid

Appearance and Odor: A solution in DMSO

Melting Point: No data.

Boiling Point: No data.

Flash Pt: 89.00 C Method Used: Closed Cup

Evaporation Rate: No data.

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

Vapor Pressure (vs. Air or mm Hg): 0.37 MM_HG at 20.0 C

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

Specific Gravity (Water = 1): No data.

Solubility in Water: No data.

Autoignition Pt: 215.00 C

9.2 Other Information

Percent Volatile: No data.

Section 10. Stability and Reactivity

- 10.1 Reactivity:** No data available.
- 10.2 Stability:** Unstable ☐ Stable ☒
- 10.3 Stability Note(s):** Stable if stored in accordance with information listed on the product insert.
- Polymerization:** Will occur ☐ Will not occur ☒
- 10.4 Conditions To Avoid:** heat, flames and sparks
- 10.5 Incompatibility - Materials To Avoid:** acid chlorides
phosphorus halides
strong acids
alkali metals
strong oxidizing agents
strong reducing agents
- 10.6 Hazardous Decomposition Or Byproducts:** carbon monoxide
carbon dioxide
sulfur oxides



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Section 11. Toxicological Information

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|---|--|
| 11.1 Information on Toxicological Effects: | 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 |
| Carcinogenicity: | NTP? No IARC Monographs? No OSHA Regulated? No |

| CAS # | Hazardous Components (Chemical Name) | NTP | IARC | ACGIH | OSHA |
|---------|---------------------------------------|------|------|-------|------|
| NA | Cell-Based Assay (-)-Nutlin-3 (10 mM) | n.a. | n.a. | n.a. | n.a. |
| 67-68-5 | Dimethyl sulfoxide, anhydrous | n.a. | n.a. | n.a. | n.a. |

Section 12. Ecological Information

| | |
|---|--|
| 12.1 Toxicity: | Avoid release into the environment. Runoff from fire control or dilution water may cause pollution. |
| 12.2 Persistence and Degradability: | No data available. |
| 12.3 Bioaccumulative Potential: | No data available. |
| 12.4 Mobility in Soil: | No data available. |
| 12.5 Results of PBT and vPvB assessment: | No data available. |
| 12.6 Other adverse effects: | No data available. |

Section 13. Disposal Considerations

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|------------------------------------|---|
| 13.1 Waste Disposal Method: | Dispose in accordance with local, state, and federal regulations. |
|------------------------------------|---|

Section 14. Transport Information

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|--|---|
| 14.1 LAND TRANSPORT (US DOT): | |
| DOT Proper Shipping Name: | Not dangerous goods. |
| DOT Hazard Class: | |
| UN/NA Number: | |
| 14.1 LAND TRANSPORT (European ADR/RID): | |
| ADR/RID Shipping Name: | Not dangerous goods. |
| UN Number: | |
| Hazard Class: | |
| 14.3 AIR TRANSPORT (ICAO/IATA): | |
| ICAO/IATA Shipping Name: | Not dangerous goods. |
| Additional Transport Information: | Transport in accordance with local, state, and federal regulations. |



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Section 15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

| CAS # | Hazardous Components (Chemical Name) | S. 302 (EHS) | S. 304 RQ | S. 313 (TRI) |
|---------|---------------------------------------|--------------|-----------|--------------|
| NA | Cell-Based Assay (-)-Nutlin-3 (10 mM) | No | No | No |
| 67-68-5 | Dimethyl sulfoxide, anhydrous | No | No | No |

| CAS # | Hazardous Components (Chemical Name) | Other US EPA or State Lists |
|---------|---------------------------------------|---|
| NA | Cell-Based Assay (-)-Nutlin-3 (10 mM) | CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No |
| 67-68-5 | Dimethyl sulfoxide, anhydrous | CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No |

Regulatory Information Statement: This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC) No.1272/2008.

Section 16. Other Information

Revision Date: 03/24/2015

Additional Information About This Product: No data available.

Company Policy or Disclaimer: 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.

according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

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

- 1.1 Product Code:** 600061
Product Name: Cell-Based Assay p53 Total Monoclonal Primary Antibody
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**
Relevant identified uses: For research use only, not for human or veterinary use.
- 1.3 Details of the Supplier of the Safety Data Sheet:**
- Company Name:** Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108
- Web site address:** www.caymanchem.com
- Information:** Cayman Chemical Company +1 (734)971-3335
- 1.4 Emergency telephone number:**
- Emergency Contact:** CHEMTREC Within USA and Canada: +1 (800)424-9300
CHEMTREC Outside USA and Canada: +1 (703)527-3887

Section 2. Hazards Identification

- 2.1 Classification of the Substance or Mixture:**
- 2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:**
- 2.2 Label Elements:**
- 2.2.1 Labeling according to Regulation (EC) No 1272/2008 [CLP]:**
- GHS Signal Word:** None
- GHS Hazard Phrases:**
Based on evaluation of currently available data this substance or mixture is not classifiable according to GHS.
- GHS Precaution Phrases:**
No phrases apply.
- GHS Response Phrases:**
No phrases apply.
- GHS Storage and Disposal Phrases:**
Please refer to Section 7 for Storage and Section 13 for Disposal information.
- 2.3 Adverse Human Health** Material may be irritating to the mucous membranes and upper respiratory tract.
- Effects and Symptoms:** May be harmful by inhalation, ingestion, or skin absorption.
May cause eye, skin, or respiratory system irritation.
To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Section 3. Composition/Information on Ingredients

| CAS # / RTECS # | Hazardous Components (Chemical Name)/ REACH Registration No. | Concentration | EC No./ EC Index No. | GHS Classification |
|------------------------|---|---------------|-------------------------|--------------------|
| NA NA | p53 Monoclonal Antibody (Clone BP53-12) | 0.0 -0.1 % | NA NA | No data available. |
| 7647-14-5 VZ4725000 | Sodium chloride | 0.85 % | 231-598-3 NA | No data available. |
| 7778-77-0 TC6615500 | Potassium phosphate, Monobasic | 0.03 % | 231-913-4 NA | No data available. |
| 7758-79-4 NA | Sodium phosphate | 0.106 % | 231-839-2 NA | No data available. |



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| | | | | |
|------------------------|-------|------------------|-----------------|--------------------|
| 7732-18-5 ZC0110000 | Water | 98.914 -99.914 % | 231-791-2 NA | No data available. |
|------------------------|-------|------------------|-----------------|--------------------|

Section 4. First Aid Measures

4.1 Description of First Aid Measures:

Measures:

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 15 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 15 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.

Section 5. Fire Fighting Measures

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

Media: Use water spray to cool fire-exposed containers.

Unsuitable Extinguishing A solid water stream may be inefficient.

Media:

5.2 Flammable Properties and No data available.

Hazards:

Flash Pt: No data.

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

Autoignition Pt: No data.

5.3 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.

Section 6. Accidental Release Measures

6.1 Protective Precautions, Avoid breathing vapors and provide adequate ventilation.

Protective Equipment and As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator,
Emergency Procedures: and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

6.2 Environmental Take steps to avoid release into the environment, if safe to do so.

Precautions:

6.3 Methods and Material For Contain spill and collect, as appropriate.

Containment and Cleaning Transfer to a chemical waste container for disposal in accordance with local regulations.

Up:

Section 7. Handling and Storage

7.1 Precautions To Be Taken Avoid breathing dust/fume/gas/mist/vapours/spray.

in Handling: Avoid prolonged or repeated exposure.

7.2 Precautions To Be Taken Keep container tightly closed.

in Storing: Store in accordance with information listed on the product insert.



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Cell-Based Assay p53 Total Monoclonal Primary Antibody

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Section 8. Exposure Controls/Personal Protection

8.1 Exposure Parameters:

| CAS # | Partial Chemical Name | Britain EH40 | France VL | Europe |
|-----------|---|--------------|-----------|----------|
| NA | p53 Monoclonal Antibody (Clone BP53-12) | No data. | No data. | No data. |
| 7647-14-5 | Sodium chloride | No data. | No data. | No data. |
| 7778-77-0 | Potassium phosphate, Monobasic | No data. | No data. | No data. |
| 7758-79-4 | Sodium phosphate | No data. | No data. | No data. |
| 7732-18-5 | Water | No data. | No data. | No data. |

| CAS # | Partial Chemical Name | OSHA TWA | ACGIH TWA | Other Limits |
|-----------|---|----------|-----------|--------------|
| NA | p53 Monoclonal Antibody (Clone BP53-12) | No data. | No data. | No data. |
| 7647-14-5 | Sodium chloride | No data. | No data. | No data. |
| 7778-77-0 | Potassium phosphate, Monobasic | No data. | No data. | No data. |
| 7758-79-4 | Sodium phosphate | No data. | No data. | No data. |
| 7732-18-5 | Water | No data. | No data. | No data. |

8.2 Exposure Controls:

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

8.2.2 Personal protection equipment:

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.

No data available.

Section 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

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

Appearance and Odor: Solution

Melting Point: No data.

Boiling Point: No data.

Flash Pt: No data.

Evaporation Rate: No data.

Flammability (solid, gas): No data available.

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

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

Vapor Density (vs. Air = 1):

No data.



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Specific Gravity (Water = 1): No data.**Solubility in Water:** No data.**Autoignition Pt:** No data.**9.2 Other Information****Percent Volatile:** No data.

Section 10. Stability and Reactivity

10.1 Reactivity: No data available.**10.2 Stability:** Unstable [] Stable [X]**10.3 Stability Note(s):** Stable if stored in accordance with information listed on the product insert.**Polymerization:** Will occur [] Will not occur [X]**10.4 Conditions To Avoid:** No data available.**10.5 Incompatibility - Materials** No data available.**To Avoid:****10.6 Hazardous** No data available.**Decomposition or****Byproducts:**

Section 11. Toxicological Information

11.1 Information on The toxicological effects of this product have not been thoroughly studied.**Toxicological Effects:****Carcinogenicity:** NTP? No IARC Monographs? No OSHA Regulated? No

| CAS # | Hazardous Components (Chemical Name) | NTP | IARC | ACGIH | OSHA |
|-----------|---|------|------|-------|------|
| NA | p53 Monoclonal Antibody (Clone BP53-12) | n.a. | n.a. | n.a. | n.a. |
| 7647-14-5 | Sodium chloride | n.a. | n.a. | n.a. | n.a. |
| 7778-77-0 | Potassium phosphate, Monobasic | n.a. | n.a. | n.a. | n.a. |
| 7758-79-4 | Sodium phosphate | n.a. | n.a. | n.a. | n.a. |
| 7732-18-5 | Water | n.a. | n.a. | n.a. | n.a. |

Section 12. Ecological Information

12.1 Toxicity: Avoid release into the environment.

Runoff from fire control or dilution water may cause pollution.

12.2 Persistence and No data available.**Degradability:****12.3 Bioaccumulative** No data available.**Potential:****12.4 Mobility in Soil:** No data available.**12.5 Results of PBT and vPvB** No data available.**assessment:****12.6 Other adverse effects:** No data available.



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Section 13. Disposal Considerations

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

Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Not dangerous goods.

DOT Hazard Class:

UN/NA Number:

14.1 LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name: Not dangerous goods.

UN Number:

Hazard Class:

14.3 AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Not dangerous goods.

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

Section 15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

| CAS # | Hazardous Components (Chemical Name) | S. 302 (EHS) | S. 304 RQ | S. 313 (TRI) |
|-----------|---|--------------|-----------|--------------|
| NA | p53 Monoclonal Antibody (Clone BP53-12) | No | No | No |
| 7647-14-5 | Sodium chloride | No | No | No |
| 7778-77-0 | Potassium phosphate, Monobasic | No | No | No |
| 7758-79-4 | Sodium phosphate | No | No | No |
| 7732-18-5 | Water | No | No | No |

| CAS # | Hazardous Components (Chemical Name) | Other US EPA or State Lists |
|-----------|---|---|
| NA | p53 Monoclonal Antibody (Clone BP53-12) | CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No |
| 7647-14-5 | Sodium chloride | CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No |
| 7778-77-0 | Potassium phosphate, Monobasic | CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No |
| 7758-79-4 | Sodium phosphate | CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No |
| 7732-18-5 | Water | CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No |

Regulatory Information Statement:

This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC) No.1272/2008.



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Cell-Based Assay p53 Total Monoclonal Primary
Antibody

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Supersedes Revision: 05/12/2009

Section 16. Other Information

Revision Date: 05/04/2015

Additional Information About No data available.

This Product:

Company Policy or Disclaimer: 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.



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DyLight™ 549-Conjugated Goat Anti-Mouse IgG Secondary Antibody

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Supersedes Revision: 05/12/2009

according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

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

- 1.1 Product Code:** 600062
Product Name: DyLight™ 549-Conjugated Goat Anti-Mouse IgG Secondary Antibody
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**
Relevant identified uses: For research use only, not for human or veterinary use.
- 1.3 Details of the Supplier of the Safety Data Sheet:**
- Company Name:** Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108
- Web site address:** www.caymanchem.com
- Information:** Cayman Chemical Company +1 (734)971-3335
- 1.4 Emergency telephone number:**
- Emergency Contact:** CHEMTREC Within USA and Canada: +1 (800)424-9300
CHEMTREC Outside USA and Canada: +1 (703)527-3887

Section 2. Hazards Identification

- 2.1 Classification of the Substance or Mixture:**
- 2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:**
- 2.2 Label Elements:**
- 2.2.1 Labeling according to Regulation (EC) No 1272/2008 [CLP]:**
- GHS Signal Word:** None
- GHS Hazard Phrases:**
Based on evaluation of currently available data this substance or mixture is not classifiable according to GHS.
- GHS Precaution Phrases:**
No phrases apply.
- GHS Response Phrases:**
No phrases apply.
- GHS Storage and Disposal Phrases:**
Please refer to Section 7 for Storage and Section 13 for Disposal information.
- 2.3 Adverse Human Health** Material may be irritating to the mucous membranes and upper respiratory tract.
- Effects and Symptoms:** May be harmful by inhalation, ingestion, or skin absorption.
May cause eye, skin, or respiratory system irritation.
To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Section 3. Composition/Information on Ingredients

| CAS # / RTECS # | Hazardous Components (Chemical Name)/ REACH Registration No. | Concentration | EC No./ EC Index No. | GHS Classification |
|----------------------|---|---------------|-------------------------|--------------------|
| NA NA | DyLight™ 549-Conjugated Goat Anti-Mouse IgG Secondary Antibody | 50.0 % | NA NA | No data available. |
| 56-81-5 MA8050000 | Glycerol | 50.0 % | 200-289-5 NA | No data available. |

Section 4. First Aid Measures

4.1 Description of First Aid Measures:

- 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 15 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 15 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.

Section 5. Fire Fighting Measures

- 5.1 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.

Media:

- 5.2 Flammable Properties and Hazards:** Emits toxic fumes under fire conditions.

Hazards:

Flash Pt: No data.

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

Autoignition Pt: No data.

- 5.3 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.

Section 6. Accidental Release Measures

- 6.1 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).

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

- 6.3 Methods and Material For Containment and Cleaning Up:** Contain spill and collect, as appropriate. Transfer to a chemical waste container for disposal in accordance with local regulations.

Section 7. Handling and Storage

- 7.1 Precautions To Be Taken in Handling:** Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid prolonged or repeated exposure.
- 7.2 Precautions To Be Taken in Storing:** Keep container tightly closed. Store in accordance with information listed on the product insert.

Section 8. Exposure Controls/Personal Protection

8.1 Exposure Parameters:

| CAS # | Partial Chemical Name | Britain EH40 | France VL | Europe |
|-------|--|--------------|-----------|----------|
| NA | DyLight™ 549-Conjugated Goat Anti-Mouse IgG Secondary Antibody | No data. | No data. | No data. |



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Secondary Antibody

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| 56-81-5 | Glycerol | TWA: 10 mg/m3 () STEL: () | TWA: 10 mg/m3 | No data. |
|---------|--|------------------------------------|---------------|--------------|
| CAS # | Partial Chemical Name | OSHA TWA | ACGIH TWA | Other Limits |
| NA | DyLight™ 549-Conjugated Goat Anti-Mouse IgG Secondary Antibody | No data. | No data. | No data. |
| 56-81-5 | Glycerol | PEL: 15 (dust); 5 (resp.) mg/m3 | TLV: 10 mg/m3 | No data. |

8.2 Exposure Controls:

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

8.2.2 Personal protection equipment:

Eye Protection: Safety glasses

Protective Gloves: Compatible chemical-resistant gloves

Other Protective Clothing: Lab coat

Respiratory Equipment NIOSH approved respirator, as conditions warrant.

(Specify Type):

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.

No data available.

Section 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

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

Appearance and Odor: Solution

Melting Point: No data.

Boiling Point: No data.

Flash Pt: No data.

Evaporation Rate: No data.

Flammability (solid, gas): No data available.

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

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

Hg):

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

Specific Gravity (Water = 1): No data.

Solubility in Water: No data.

Autoignition Pt: No data.



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DyLight™ 549-Conjugated Goat Anti-Mouse IgG Secondary Antibody

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9.2 Other Information

Percent Volatile: No data.

Section 10. Stability and Reactivity

- 10.1 Reactivity:** No data available.
- 10.2 Stability:** Unstable [] Stable [X]
- 10.3 Stability Note(s):** Stable if stored in accordance with information listed on the product insert.
- Polymerization:** Will occur [] Will not occur [X]
- 10.4 Conditions To Avoid:** No data available.
- 10.5 Incompatibility - Materials** strong bases
To Avoid: strong oxidizing agents
- 10.6 Hazardous** carbon dioxide
Decomposition or Byproducts: carbon monoxide

Section 11. Toxicological Information

- 11.1 Information on Toxicological Effects:** The toxicological effects of this product have not been thoroughly studied.
- Chronic Toxicological Effects:** Glycerol - Irritation Data: Eyes (rabbit): 500 mg (24h) mild; Skin (rabbit): 500 mg (24h) mild; Glycerol - 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. Glycerol RTECS Number: MA8050000
- Carcinogenicity:** NTP? No IARC Monographs? No OSHA Regulated? No

| CAS # | Hazardous Components (Chemical Name) | NTP | IARC | ACGIH | OSHA |
|---------|--|------|------|-------|------|
| NA | DyLight™ 549-Conjugated Goat Anti-Mouse IgG Secondary Antibody | n.a. | n.a. | n.a. | n.a. |
| 56-81-5 | Glycerol | n.a. | n.a. | n.a. | n.a. |

Section 12. Ecological Information

- 12.1 Toxicity:** Avoid release into the environment.
Runoff from fire control or dilution water may cause pollution.
- 12.2 Persistence and Degradability:** No data available.
- 12.3 Bioaccumulative Potential:** No data available.
- 12.4 Mobility in Soil:** No data available.
- 12.5 Results of PBT and vPvB assessment:** No data available.
- 12.6 Other adverse effects:** No data available.



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DyLight™ 549-Conjugated Goat Anti-Mouse IgG
Secondary Antibody

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Section 13. Disposal Considerations

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

Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Not dangerous goods.

DOT Hazard Class:

UN/NA Number:

14.1 LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name: Not dangerous goods.

UN Number:

Hazard Class:

14.3 AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Not dangerous goods.

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

Section 15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

| CAS # | Hazardous Components (Chemical Name) | S. 302 (EHS) | S. 304 RQ | S. 313 (TRI) |
|---------|--|--------------|-----------|--------------|
| NA | DyLight™ 549-Conjugated Goat Anti-Mouse IgG Secondary Antibody | No | No | No |
| 56-81-5 | Glycerol | No | No | No |

| CAS # | Hazardous Components (Chemical Name) | Other US EPA or State Lists |
|---------|--|---|
| NA | DyLight™ 549-Conjugated Goat Anti-Mouse IgG Secondary Antibody | CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No |
| 56-81-5 | Glycerol | CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No |

Regulatory Information Statement: This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC) No.1272/2008.

Section 16. Other Information

Revision Date: 05/04/2015

Additional Information About This Product: No data available.

This Product:

Company Policy or Disclaimer: 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.

according to Regulation (EC) No. 1907/2006 as amended by (EC) No. 1272/2008

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

- 1.1 Product Code:** 10009899
Product Name: Cell-Based Assay Fixative
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**
Relevant identified uses: For research use only, not for human or veterinary use.
- 1.3 Details of the Supplier of the Safety Data Sheet:**
- Company Name:** Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108
- Web site address:** www.caymanchem.com
- Information:** Cayman Chemical Company +1 (734)971-3335
- 1.4 Emergency telephone number:**
- Emergency Contact:** CHEMTREC Within USA and Canada: +1 (800)424-9300
CHEMTREC Outside USA and Canada: +1 (703)527-3887

Section 2. Hazards Identification

- 2.1 Classification of the Substance or Mixture:**
- 2.1.1 Classification according to Regulation (EC) No 1272/2008 [CLP]:**
- Flammable Liquids, Category 2
Acute Toxicity: Inhalation, Category 3
Acute Toxicity: Oral, Category 3
Acute Toxicity: Skin, Category 3
Skin Corrosion/Irritation, Category 2
Skin Sensitization, Category 1
Carcinogenicity, Category 2
Specific Target Organ Toxicity (single exposure), Category 1
- 2.2 Label Elements:**
- 2.2.1 Labeling according to Regulation (EC) No 1272/2008 [CLP]:**



GHS Signal Word: Danger

GHS Hazard Phrases:

H225: Highly flammable liquid and vapor.
H301: Toxic if swallowed.
H311: Toxic in contact with skin.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H331: Toxic if inhaled.
H351: Suspected of causing cancer.
H370: Causes damage to organs.



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GHS Precaution Phrases:

P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P210: Keep away from {heat/sparks/open flames/hot surfaces}. - No smoking.
P260: Do not breathe {dust/fume/gas/mist/vapors/spray}.
P264: Wash {hands} thoroughly after handling.
P272: Contaminated work clothing should not be allowed out of the workplace.
P280: Wear {protective gloves/protective clothing/eye protection/face protection}.

GHS Response Phrases:

P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302+352: IF ON SKIN: Wash with plenty of soap and water.
P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P308+311: If exposed or concerned: Call a {POISON CENTER/Doctor/...}.
P313: Get medical advice/attention.
P311: Call a POISON CENTER or doctor/physician.
P330: Rinse mouth.
P332+313: If skin irritation occurs, get medical advice/attention.
P333+313: If skin irritation or rash occurs, seek medical advice/attention.
P361+364: Take off immediately all contaminated clothing and wash it before reuse.
P362+364: Take off contaminated clothing and wash it before reuse.

GHS Storage and Disposal Phrases:

Please refer to Section 7 for Storage and Section 13 for Disposal information.

2.3 Adverse Human Health Causes damage to organs.

Effects and Symptoms: Causes skin irritation.

Irritating to the skin, eyes, and respiratory tract.

Harmful by inhalation, ingestion, or skin absorption.

Lachrymator.

May cause an allergic skin reaction.

Suspected of causing cancer.

Toxic if inhaled.

Toxic if swallowed.

Toxic in contact with skin.

To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Section 3. Composition/Information on Ingredients

| CAS # / RTECS # | Hazardous Components (Chemical Name)/ REACH Registration No. | Concentration | EC No./ EC Index No. | GHS Classification |
|------------------------|---|---------------|---------------------------|--|
| 77-86-1 TY2900000 | Trizma base | < 0.3 % | 201-064-4 NA | Skin Corr. 2: H315 Eye Damage 2: H319 STOT (SE) 3: H335 |
| 7647-14-5 VZ4725000 | Sodium chloride | < 0.8 % | 231-598-3 NA | No data available. |
| 50-00-0 LP8925000 | Formaldehyde | 4.0 % | 200-001-8 605-001-00-5 | Acute Tox.(O) 3: H301 Acute Tox.(D) 3: H311 Skin Corr. 1B: H314 Skin Sens. 1: H317 Acute Tox.(I) 3: H331 Carcinogen 2: H351 |

Multi-region format



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| | | | | |
|------------------------|----------|---------|---------------------------|--|
| 67-56-1 PC1400000 | Methanol | 1.0 % | 200-659-6 603-001-00-X | Flam. Liq. 2: H225 Acute Tox.(O) 3: H301 Acute Tox.(D) 3: H311 Acute Tox.(I) 3: H331 STOT (SE) 1: H370 |
| 7732-18-5 ZC0110000 | Water | >93.0 % | 231-791-2 NA | No data available. |

Section 4. First Aid Measures

4.1 Description of First Aid

Measures:

- 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 15 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 15 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.

- 4.2 Important Symptoms and Effects, Both Acute and Delayed:** Exposure may cause: burning sensation, convulsions, coughing, chest pain, difficulty breathing, gastrointestinal disturbance, and wheezing.
Skin and respiratory sensitizer.

Section 5. Fire Fighting Measures

- 5.1 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.

- 5.2 Flammable Properties and Hazards:** Emits toxic fumes under fire conditions.

Hazards:

Flash Pt: No data.

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

Autoignition Pt: No data.

- 5.3 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.

Section 6. Accidental Release Measures

- 6.1 Protective Precautions,** Avoid breathing vapors and provide adequate ventilation.

Protective Equipment and Emergency Procedures: 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).

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

- 6.3 Methods and Material For Containment and Cleaning Up:** Contain spill and collect, as appropriate.

Transfer to a chemical waste container for disposal in accordance with local regulations.

Up:

Section 7. Handling and Storage

- 7.1 Precautions To Be Taken in Handling:** Avoid breathing dust/fume/gas/mist/vapours/spray.
Avoid prolonged or repeated exposure.
- 7.2 Precautions To Be Taken in Storing:** Keep container tightly closed.
Store in accordance with information listed on the product insert.

Section 8. Exposure Controls/Personal Protection

8.1 Exposure Parameters:

| CAS # | Partial Chemical Name | Britain EH40 | France VL | Europe |
|-----------|-----------------------|---|---|----------------|
| 77-86-1 | Trizma base | No data. | No data. | No data. |
| 7647-14-5 | Sodium chloride | No data. | No data. | No data. |
| 50-00-0 | Formaldehyde | TWA: 2.5 mg/m3 (2 ppm) STEL: 2.5 mg/m3 (2 ppm) | TWA: 0.5 ppm STEL: 1 ppm | No data. |
| 67-56-1 | Methanol | TWA: 266 mg/m3 (200 ppm) STEL: 333 mg/m3 (250 ppm) | TWA: 260 mg/m3 (200 ppm) STEL: 1300 mg/m3 (1000 ppm) | TWA: 260 mg/m3 |
| 7732-18-5 | Water | No data. | No data. | No data. |
| CAS # | Partial Chemical Name | OSHA TWA | ACGIH TWA | Other Limits |
| 77-86-1 | Trizma base | No data. | No data. | No data. |
| 7647-14-5 | Sodium chloride | No data. | No data. | No data. |
| 50-00-0 | Formaldehyde | PEL: 0.75 ppm STEL: 2 ppm (15 min) | CEIL: 0.3 ppm | No data. |
| 67-56-1 | Methanol | PEL: 200 ppm | TLV: 200 ppm STEL: 250 ppm | No data. |
| 7732-18-5 | Water | No data. | No data. | No data. |

8.2 Exposure Controls:

- 8.2.1 Engineering Controls (Ventilation etc.):** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
- 8.2.2 Personal protection equipment:**
- 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 facility and a safety shower.
Wash thoroughly after handling.
No data available.

Section 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Physical States: ☐ Gas ☒ Liquid ☐ Solid
Appearance and Odor: Solution
pH: 7.4
Melting Point: No data.
Boiling Point: No data.
Flash Pt: No data.
Evaporation Rate: No data.
Flammability (solid, gas): No data available.
Explosive Limits: LEL: No data. UEL: 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.

9.2 Other Information

Percent Volatile: No data.

Section 10. Stability and Reactivity

10.1 Reactivity: No data available.
10.2 Stability: Unstable ☐ Stable ☒
10.3 Stability Note(s): Stable if stored in accordance with information listed on the product insert.
Polymerization: Will occur ☐ Will not occur ☒
10.4 Conditions To Avoid: heat, flames and sparks
10.5 Incompatibility - Materials To Avoid: acid anhydrides
 amines
 aniline
 isocyanates
 peroxides
 phenol
 strong acids
 strong bases
 strong oxidizing agents
 urea
10.6 Hazardous Decomposition or Byproducts: carbon dioxide
 carbon monoxide

Section 11. Toxicological Information

| | |
|---|---|
| 11.1 Information on Toxicological Effects: | <p>The toxicological effects of this product have not been thoroughly studied.</p> <p>Formaldehyde - Toxicity Data: Oral LDLo (human): 70 mg/kg; Oral LDLo (wmn): 108 mg/kg; Oral TDLo (wmn): 3.6 ml/kg; Oral LD50 (mouse): 42 mg/kg; Oral LD50 (rat): 100 mg/kg; Inhalation TCLo (man): 300 ig/m3; Inhalation LC50 (rat): 250 ppm (2h); Skin LD50 (rabbit): 270 mg/kg; Formaldehyde - Irritation Data: Eyes (rabbit): 750 ig (24h) severe; Skin (rabbit): 2 mg (24h) severe; Methanol - Toxicity Data: Oral LD50 (rat): 5,600 mg/kg; Oral LD50 (rabbit): 14,200 mg/kg; Inhalation LC50 (rat): 64,000 ppm (4h); Inhalation LC50 (mouse): 61,100 ppm (134 m); Skin LD50 (rabbit): 15,800 mg/kg; Oral LDLO (human): 143 mg/kg; Methanol - Irritation Data: Skin (rabbit): 20 mg (24h) moderate; Eyes (rabbit): 40 mg moderate; Eyes (rabbit): 100 mg (24h) moderate; Trizma Base - Toxicity Data: OralLD50 (mouse): 5500 mg/kg; Oral LD50 (rat): >3000 mg/kg</p> |
| Chronic Toxicological Effects: | <p>Formaldehyde - Investigated as a mutagen, reproductive effector, and tumorigen.</p> <p>Methanol - Investigated as a mutagen and reproductive effector.</p> <p>Trizma Base - Investigated as a drug and reproductive effector.</p> <p>Only select Registry of Toxic Effects of Chemical Substances (RTECS) data is presented here. See actual entry in RTECS for complete information.</p> <p>Formaldehyde RTECS Number: LP8925000</p> <p>Methanol RTECS Number: PC1400000</p> <p>Trizma Base RTECS Number: TY2900000</p> |
| Carcinogenicity/Other Information: | <p>Formaldehyde - California Prop. 65 carcinogen.</p> <p>Formaldehyde - IARC: 1 - Group 1: Carcinogenic to humans;</p> <p>Formaldehyde - NTP: Reasonably anticipated to be a human carcinogen;</p> |
| Carcinogenicity: | <p>NTP? No IARC Monographs? Yes OSHA Regulated? No</p> |

| CAS # | Hazardous Components (Chemical Name) | NTP | IARC | ACGIH | OSHA |
|-----------|--------------------------------------|-------|------|-------|------|
| 77-86-1 | Trizma base | n.a. | n.a. | n.a. | n.a. |
| 7647-14-5 | Sodium chloride | n.a. | n.a. | n.a. | n.a. |
| 50-00-0 | Formaldehyde | Known | 1 | A2 | Yes |
| 67-56-1 | Methanol | n.a. | n.a. | n.a. | n.a. |
| 7732-18-5 | Water | n.a. | n.a. | n.a. | n.a. |

Section 12. Ecological Information

| | |
|---|---|
| 12.1 Toxicity: | <p>Avoid release into the environment.</p> <p>Runoff from fire control or dilution water may cause pollution.</p> |
| 12.2 Persistence and Degradability: | No data available. |
| 12.3 Bioaccumulative Potential: | No data available. |
| 12.4 Mobility in Soil: | No data available. |
| 12.5 Results of PBT and vPvB assessment: | No data available. |
| 12.6 Other adverse effects: | No data available. |



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Supersedes Revision: 08/28/2014

Section 13. Disposal Considerations

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

Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Not dangerous goods.

DOT Hazard Class:

UN/NA Number:

14.1 LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name: Not dangerous goods.

UN Number:

Hazard Class:

14.3 AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Not dangerous goods.

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

Section 15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

| CAS # | Hazardous Components (Chemical Name) | S. 302 (EHS) | S. 304 RQ | S. 313 (TRI) |
|-----------|--------------------------------------|--------------|-------------|---------------|
| 77-86-1 | Trizma base | No | No | Yes-Cat. N106 |
| 7647-14-5 | Sodium chloride | No | No | No |
| 50-00-0 | Formaldehyde | Yes 500 LB | Yes 100 LB | Yes |
| 67-56-1 | Methanol | No | Yes 5000 LB | Yes |
| 7732-18-5 | Water | No | No | No |

| CAS # | Hazardous Components (Chemical Name) | Other US EPA or State Lists |
|-----------|--------------------------------------|--|
| 77-86-1 | Trizma base | CAA HAP,ODC: HAP; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No |
| 7647-14-5 | Sodium chloride | CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No |
| 50-00-0 | Formaldehyde | CAA HAP,ODC: HAP; CWA NPDES: Yes; TSCA: Yes - Inventory; CA PROP.65: Yes |
| 67-56-1 | Methanol | CAA HAP,ODC: HAP; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: Yes |
| 7732-18-5 | Water | CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No |

Regulatory Information Statement:

This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC) No.1272/2008.



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Revision: 05/04/2015
Supersedes Revision: 08/28/2014

Section 16. Other Information

Revision Date: 05/04/2015

Additional Information About No data available.

This Product:

Company Policy or Disclaimer: 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.



SAFETY DATA SHEET

Cell-Based Assay Blocking Solution

Page: 1

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

Revision: 03/29/2013
Supersedes Revision: 12/21/2011

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

Product Code: 10009906

Product Name: Cell-Based Assay Blocking Solution

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): Handle as if capable of transmitting infectious agents.
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. Normal Goat Serum | NA | 5.0 % | NA | No phrases apply. | NA |
| 2. Sodium azide | 26628-22-8 | 0.02 % | 247-852-1 | R27/28-32-50/53 | VY8050000 |
| 3. Sodium chloride | 7647-14-5 | 0.8 % | 231-598-3 | R36 | VZ4725000 |
| 4. Trizma base | 77-86-1 | 0.3 % | 201-064-4 | R36/37/38 | TY2900000 |
| 5. Water | 7732-18-5 | 93.88 % | 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. After removal, flush contaminated area and all cleaning materials with a 10% bleach aqueous solution. |

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 TWA | Other Limits |
|--------------------------------------|------------|---|-----------------------------------|-----------------------------------|
| 1. Normal Goat Serum | NA | No data. | No data. | No data. |
| 2. Sodium azide | 26628-22-8 | No data. | CEIL: 0.29 mg/m3 | No data. |
| 3. Sodium chloride | 7647-14-5 | No data. | No data. | No data. |
| 4. Trizma base | 77-86-1 | No data. | No data. | No data. |
| 5. Water | 7732-18-5 | No data. | No data. | No data. |
| Hazardous Components (Chemical Name) | CAS # | Britain EH40 | France VL | Europe |
| 1. Normal Goat Serum | NA | No data. | No data. | No data. |
| 2. Sodium azide | 26628-22-8 | TWA: 0.1 mg/m3 () STEL: 0.3 mg/m3 () | TWA: 0.1 mg/m3 STEL: 0.3 mg/m3 | TWA: 0.1 mg/m3 STEL: 0.3 mg/m3 |



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Hazardous Decomposition Or Byproducts: carbon dioxide
carbon monoxide

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. Normal Goat Serum | NA | n.a. | n.a. | n.a. | n.a. |
| 2. Sodium azide | 26628-22-8 | n.a. | n.a. | A4 | n.a. |
| 3. Sodium chloride | 7647-14-5 | n.a. | n.a. | n.a. | n.a. |
| 4. Trizma base | 77-86-1 | n.a. | n.a. | n.a. | n.a. |
| 5. 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 Biological Hazard: B

European Community Risk and Safety Phrases

S24/25 - Avoid contact with skin and eyes.

S28 - After contact with skin, wash immediately with plenty of soap-suds.

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. Normal Goat Serum | NA | No | No | No | No |
| 2. Sodium azide | 26628-22-8 | Yes 500 LB | Yes 1000 LB | Yes | No |
| 3. Sodium chloride | 7647-14-5 | No | No | No | No |
| 4. Trizma base | 77-86-1 | No | No | Yes-Cat. N106 | No |
| 5. 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. Normal Goat Serum | NA | No | No | No | No |
| 2. Sodium azide | 26628-22-8 | No | No | Inventory | No |
| 3. Sodium chloride | 7647-14-5 | No | No | Inventory | No |
| 4. Trizma base | 77-86-1 | HAP | No | Inventory | No |



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| Hazardous Components (Chemical Name) | CAS # | CAA HAP,ODC | CWA NPDES | TSCA | CA PROP.65 |
|--------------------------------------|-----------|-------------|-----------|-----------|------------|
| 5. 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:

03/29/2013

Company Policy or Disclaimer

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

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