

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Name** SimpleChIP ® Enzymatic Chromatin IP Kit (Agarose Beads)  
**Product Number** 9002  
**Identified Uses** For Research Use Only (RUO). Not intended for use in humans or animals.  
 Not intended for therapeutic or diagnostic procedures.

**Manufacturer/Supplier** Cell Signaling Technology, Inc.  
 3 Trask Lane  
 Danvers, MA 01923 USA

**Phone #:** 1-978-867-2300  
**Emergency Tel#** 1-978-578-6737

**2. HAZARDS IDENTIFICATION**
**Emergency Overview**
**Warning!**

Harmful if swallowed.  
 Harmful if inhaled.  
 Causes serious eye damage.  
 Harmful in contact with skin.  
 Causes mild skin irritation.  
 May cause allergic skin reaction

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Physical State**

Liquids

**3. COMPOSITION/INFORMATION ON INGREDIENTS**
**Hazardous Ingredients**

Please see the individual material safety data sheets which can be found on the CST website [www.cellsignal.com/support/msds.html](http://www.cellsignal.com/support/msds.html) for hazard communication information specific to individual kit components contained in this product.

| Component SKU | Kit Component Name                 |
|---------------|------------------------------------|
| 7005S         | Glycine Solution                   |
| 7006S         | Buffer A (4X)                      |
| 7007S         | Buffer B (4X)                      |
| 7008S         | ChIP Buffer (10X)                  |
| 7009S         | ChIP Elution Buffer (2X)           |
| 7010S         | 5M NaCl                            |
| 7011S         | 0.5M EDTA                          |
| 9007S         | ChIP-Grade Protein G Agarose Beads |
| 11134S        | DNA Binding Agent A                |
| 11135S        | DNA Wash Reagent B                 |
| 11136S        | DNA Elution Reagent C              |
| 7012L         | Protease Inhibitor Cocktail (200X) |
| 7013S         | RNAse A (10mg/mL)                  |
| 10011S        | Micrococcal Nuclease               |
| 10012S        | Proteinase K                       |
| 7016S         | 1M DTT                             |
| 7014P,7015P   | SimpleChIP ® Primers               |
| 4620S         | Histone (D2B12) XP ® Rabbit mAb    |
| 2729S         | Normal Rabbit IgG                  |

**4. FIRST AID MEASURES**

**Eye Contact** Rinse immediately with plenty of water. Get medical attention.  
**Skin Contact** Rinse immediately with soap and plenty of water. Get medical attention.  
**Inhalation** Move to fresh air. Get medical attention.  
**Ingestion** Call Poison Control Center immediately. Never give anything by mouth to an unconscious person. Rinse mouth with water.  
**Notes to physician** Treat symptomatically.

**5. FIRE FIGHTING MEASURES**

**Flash Point** See Section 9. Physical and Chemical Properties  
**Suitable Extinguishing Media** Use dry chemical

|   |   |
|---|---|
| <b>Special exposure hazards</b>             | No data available   |
| <b>Special protection for fire fighters</b> | Wear appropriate self-contained breathing apparatus and protective unit |
| <b>Other information</b>                    | No data available   |

**6. ACCIDENTAL RELEASE MEASURES**

|                                  |   |
|----------------------------------|---|
| <b>Personal precautions</b>      | Do not touch or walk through spilled material. Wear personal protective equipment |
| <b>Environmental precautions</b> | Do not let product enter drains.  |
| <b>Clean up methods</b>          | Soak up with absorbent material. Keep in suitable closed containers for disposal. |
| <b>Other information</b>         | See sections 12 and 13 for additional information.                                |

**7. HANDLING AND STORAGE**

|                             |  |
|-----------------------------|--|
| <b>Safe handling advice</b> | Avoid contact with eyes and skin. Ensure adequate ventilation. |
| <b>Storage condition</b>    | Keep container tightly closed in a cool dry location.          |
| <b>Incompatibilities</b>    | No data available  |
| <b>Specific end uses</b>    | No data available  |

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Exposure Controls**  
 Apply technical measures to comply with the occupational exposure limits.

**Engineering Controls**  
 Emergency eyewash and safety shower. Mechanical exhaust required.

**Hygiene Measures**  
 Do not eat, drink or smoke when handling product. Wash hands thoroughly after handling product. Wash contaminated clothing before reuse.

**Personal Protective Equipment**

|                           |  |
|---------------------------|--|
| Respiratory Protection:   | In case of insufficient ventilation wear suitable respiratory equipment. |
| Eye Protection:           | Safety glasses with side shields   |
| Skin and body protection: | Wear suitable protective clothing, protective shoes or boots.            |
| Hand protection:          | Compatible chemical resistant gloves.                                    |

**9. PHYSICAL AND CHEMICAL PROPERTIES**
**Information on basic physical and chemical properties**

|                              |                   |
|------------------------------|-------------------|
| Physical State               | liquid            |
| Appearance                   | no data available |
| Odor                         | no data available |
| pH                           | no data available |
| Water Solubility             | no data available |
| Melting point/freezing point | no data available |
| Boiling point                | no data available |
| Evaporation rate             | no data available |
| Flammability                 | Not flammable.    |
| Flash point                  | no data available |
| Autoignition temperature     | no data available |
| Flammability limits in air   | no data available |
| Explosive properties         | no data available |
| VOC content                  | no data available |
| Decomposition temperature    | no data available |

**10. STABILITY AND REACTIVITY**

|   |                                |
|---|--------------------------------|
| <b>Stability</b>                        | Stable under normal conditions |
| <b>Conditions/Materials to avoid</b>    | No data available              |
| <b>Hazardous decomposition products</b> | No data available              |

**11. TOXICOLOGICAL INFORMATION**
**Acute Toxicity**

To the best of our knowledge, the chemical, physical and toxicological properties have not been fully investigated.

**Potential Health Effects**

**Acute Toxicity**

|            |  |
|------------|--|
| Eyes       | Causes serious eye damage.   |
| Skin       | Harmful in contact with skin. Causes mild skin irritation. May cause allergic skin reaction. |
| Inhalation | Harmful if inhaled.  |
| Ingestion  | Harmful if swallowed.  |

**Chronic Effects**

|                       |  |
|-----------------------|--|
| Carcinogenic effects  | There are no known carcinogens in this product.                            |
| Mutagenic effects     | No known significant effects or critical hazards.                          |
| Teratogenic effects   | No known significant effects or critical hazards.                          |
| Reproductive toxicity | No known significant effects or critical hazards.                          |
| Sensitization         | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |

**Target organ effects** No information available.

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12. ECOLOGICAL INFORMATION

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|                                      |   |
|--------------------------------------|---|
| <b>Ecotoxicity</b>                   | The environmental impact of this product has not been fully investigated. |
| <b>Persistence and degradability</b> | Not available   |
| <b>Bioaccumulation</b>               | Not available   |
| <b>Mobility</b>                      | Not available   |

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13. DISPOSAL CONSIDERATIONS

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**Waste Disposal Methods:** Dispose of in accordance with all applicable environmental laws and regulations.

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14. TRANSPORT INFORMATION

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|             |                                  |
|-------------|----------------------------------|
| <b>IATA</b> | Not regulated as dangerous goods |
| <b>DOT</b>  | Not regulated as dangerous goods |
| <b>MEX</b>  | Not regulated as dangerous goods |

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15. REGULATORY INFORMATION

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**HCS Classification**

Harmful if swallowed.  
Harmful if inhaled.  
Causes serious eye damage.  
Harmful in contact with skin.  
Causes mild skin irritation.  
May cause allergic skin reaction

**International Inventories**

**TSCA (8a) PAIR** -  
**EINECS/ELINCS-**  
**ENCS** -  
**IECSC** -  
**KECL** -  
**PICCS** -  
**AICS** -  
**NZIoC** -

**U.S. Federal Regulations**

**SARA 302/304/311/312 extremely hazardous products:** No products were found.  
**SARA 302/304/311/312 emergency planning and notification:** No products were found.  
**SARA 302/304/311/312 hazardous chemicals:** See individual kit component MSDS documents.  
**SARA 311/312 MSDS Distribution:** See individual kit component MSDS documents.  
**U.S. State Regulations** See individual kit component MSDS documents.  
**Canada** See individual kit component MSDS documents.

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16. OTHER INFORMATION

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**Revision date** 2012-06-06  
**Revision Note** \*\*\*Indicates updated section

**Disclaimer**

The information provided on this material safety data sheet is to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Material Safety Data Sheet

# Material Safety Data Sheet (MSDS) for Buffer A (4X)

New 03/08

## I. IDENTIFICATION:

**Product name:** Buffer A (4X)  
**Product Catalog Number:** Component of kit #9002 and #9003  
**CAS number:** None  
**Manufacturer Supplier:** Cell Signaling Technology®  
3 Trask Lane  
Danvers, MA 01923 USA  
1-978-867-2300 TEL  
1-978-867-2400 FAX  
1-978-578-6737 Emergency Phone

## II. COMPOSITION/INFORMATION ON INGREDIENTS:

According to 29 CFR 1910.1200(d), hazardous ingredients at less than <1% and carcinogens at less than < 0.1% therefore considered non-hazardous. Any hazardous or carcinogenic ingredients meeting these criteria are listed below.

| Ingredient         | CAS#      | Percent |
|--------------------|-----------|---------|
| Nonidet-40         | 9036-19-5 | 4%      |
| Potassium chloride | 7447-40-7 | 1.8%    |
| Dithiothreitol     | 3483-12-3 | <1%     |
| Magnesium chloride | 7786-30-3 | <1%     |

## III. HAZARD IDENTIFICATION:

Avoid contact, ingestion, and inhalation. May be harmful if contact with skin or swallowed. Irritating to eyes, respiratory system, skin.  
To the best of our knowledge the chemical, physical, and toxicological properties of this buffer have not been investigated.

**Target organ:** heart.

## IV. FIRST AID MEASURES:

**Inhalation:** Remove to fresh air. If breathing is difficult, get medical attention.  
**Ingestion:** If person is conscious, wash out mouth with water. Get medical attention.  
**Skin Exposure:** Wash skin with soap and water. If irritation develops or persists, get medical attention.  
**Eye Exposure:** Immediately flush eyes with water for at least 15 minutes. Get medical attention.

## V. FIRE FIGHTING MEASURES:

**Flash Point:** Not applicable.  
**Autoignition Temperature:** Not applicable.  
**Explosion:** Not applicable.  
**Fire Extinguishing Media:** Water spray, dry chemical, alcohol foam, or carbon dioxide.  
**Firefighting:** Wear protective clothing and self-contained breathing apparatus to prevent contact with skin and eyes.

## VI. ACCIDENTAL RELEASE MEASURES:

Wear appropriate personal protective equipment as indicated in Section VIII. Absorb liquid with an absorbent material. Transfer contaminated absorbent to a closed chemical waste container for disposal. Wash spill site after material has been picked up for disposal.

## VII. HANDLING AND STORAGE:

Store at 4°C in tightly closed container.  
Avoid prolonged or repeated exposure. Avoid contact with eyes, respiratory system, skin, and clothing. Wash thoroughly after handling.

## VIII. EXPOSURE CONTROLS/PERSONAL

**Ventilation System:** A system of local and general exhaust is recommended.  
**Skin Protection:** Wear compatible chemical resistant gloves and protective clothing.  
**Eye protection:** Wear chemical safety goggles. Maintain emergency eyewash and shower in work area.

## IX. EXPOSURE CONTROLS/PERSONAL PROTECTION:

**Appearance:** Liquid  
**Odor:** Odorless  
**pH :** Data not available  
**Boiling Point:** Data not available  
**Melting Point:** Data not available  
**Freezing Point:** Data not available  
**Volatile Organic Compounds (VOC):** Data not available  
**Autoignition temp.** Data not available  
**Solubility:** Soluble in water

## X. STABILITY AND REACTIVITY:

**Stability:** Stable.  
**Conditions to avoid:** Data not available.  
**Hazardous Decomposition:** Data not available.  
**Hazardous polymerization:** Will not occur.

## XI. TOXICOLOGICAL INFORMATION:

**Skin Exposure:** May cause skin irritation. May be harmful if absorbed through skin.  
**Eye Exposure:** May cause eye irritation.  
**Inhalation:** May be harmful if inhaled. Material may be irritating to mucous membrane and upper respiratory tract.  
**Ingestion:** May be harmful if swallowed.

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

## XII. ECOLOGICAL INFORMATION:

Data not available.

## XIII. DISPOSAL CONSIDERATIONS:

Dispose of in accordance with federal, state and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

## XIV. TRANSPORT INFORMATION:

**D.O.T.**  
**Proper Shipping Name:** None.  
This substance is considered non-hazardous for transport.

**IATA**  
**Proper Shipping Name:** None.  
This substance is considered non-hazardous for air transport.

## XV. REGULATORY INFORMATION:

**US Regulations/Classifications:** May be harmful if in contact with skin or swallowed. Irritating to eyes, respiratory system, skin.  
In case of contact with eyes, wash thoroughly and seek medical attention.

**SARA Listed:** No.  
**Canada (WHMIS):** DSL No, NDSL No.

## XVI. OTHER INFORMATION:

This product is not intended for use in humans. To the best of our knowledge, this document is accurate. It is intended to serve as a guide for safe use of this product in a laboratory setting by experienced personnel. The burden of safe use of this material rests entirely with the user. The above information is believed to be accurate but is not necessarily all-inclusive and shall be used only as a guide. Cell Signaling Technology, Inc., shall not be held liable for any damage resulting from the handling of or from contact with the above product.

# Material Safety Data Sheet (MSDS) for 10X ChIP Buffer

New 03/08

## I. IDENTIFICATION:

**Product name:** 10X ChIP Buffer  
**Product Catalog Number:** Component of kit #9002 and #9003  
**CAS number:** None  
**Manufacturer Supplier:** Cell Signaling Technology®  
3 Trask Lane  
Danvers, MA 01923 USA  
1-978-867-2300 TEL  
1-978-867-2400 FAX  
1-978-578-6737 Emergency Phone

## II. COMPOSITION/INFORMATION ON INGREDIENTS:

According to 29 CFR 1910.1200(d), hazardous ingredients at less than <1% and carcinogens at less than < 0.1% therefore considered non-hazardous. Any hazardous or carcinogenic ingredients meeting these criteria are listed below.

| Ingredient  | CAS#      | Percent |
|---|-----------|---------|
| Triton X-100  | 9002-93-1 | 10%     |
| Ethylenediaminetetraacetic acid (EDTA), disodium, dihydrate | 6381-92-6 | 1.9%    |
| Sodium dodecyl sulfate (SDS)                                | 151-21-3  | 1%      |

## III. HAZARD IDENTIFICATION:

May cause eye irritation or severe eye burns.  
Harmful if inhaled. May cause respiratory tract irritation.  
Harmful if swallowed.  
May be harmful if absorbed through skin. May cause skin irritation.

To the best of our knowledge the chemical, physical, and toxicological properties of this buffer have not been investigated.

## IV. FIRST AID MEASURES:

**Inhalation:** Remove to fresh air. If breathing is difficult, get medical attention.  
**Ingestion:** If person is conscious, wash out mouth with water. Get medical attention.  
**Skin Exposure:** Wash skin with soap and water. If irritation develops or persists, get medical attention.  
**Eye Exposure:** Immediately flush eyes with water for at least 15 minutes. Get medical attention.

## V. FIRE FIGHTING MEASURES:

**Flash Point:** Not applicable.  
**Autoignition Temperature:** Not applicable.  
**Explosion:** Not applicable.  
**Fire Extinguishing Media:** Water spray, dry chemical, alcohol foam, or carbon dioxide.  
**Firefighting:** Wear protective clothing and self-contained breathing apparatus to prevent contact with skin and eyes.

## VI. ACCIDENTAL RELEASE MEASURES:

Wear appropriate personal protective equipment as indicated in Section VIII. Absorb liquid with an absorbent material. Transfer contaminated absorbent to a closed chemical waste container for disposal. Wash spill site after material has been picked up for disposal.

## VII. HANDLING AND STORAGE:

Store at 4°C in tightly closed container.  
Avoid prolonged or repeated exposure. Avoid contact with eyes, respiratory system, skin, and clothing. Wash thoroughly after handling.

## VIII. EXPOSURE CONTROLS/PERSONAL

**Ventilation System:** A system of local and general exhaust is recommended.  
**Skin Protection:** Wear compatible chemical resistant gloves and protective clothing.  
**Eye protection:** Wear chemical safety goggles. Maintain emergency eyewash and shower in work area.

## IX. EXPOSURE CONTROLS/PERSONAL PROTECTION:

**Appearance:** Liquid  
**Odor:** Odorless  
**pH:** Data not available  
**Boiling Point:** Data not available  
**Melting Point:** Data not available  
**Freezing Point:** Data not available  
**Volatile Organic Compounds (VOC):** Data not available  
**Autoignition temp.:** Data not available  
**Solubility:** Soluble in water

## X. STABILITY AND REACTIVITY:

**Stability:** Stable.  
**Conditions to avoid:** Strong oxidizing agents, strong acids, strong bases.  
**Hazardous Decomposition:** Carbon monoxide, carbon dioxide, sulfur oxides, sodium oxides.  
**Hazardous polymerization:** Will not occur.

## XI. TOXICOLOGICAL INFORMATION:

**Skin Exposure:** May cause skin irritation. May be harmful if absorbed through skin.  
**Eye Exposure:** May cause eye irritation or severe eye burns.  
**Inhalation:** May be harmful if inhaled. Material may be irritating to mucous membrane and upper respiratory tract.  
**Ingestion:** May be harmful if swallowed.

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

## XII. ECOLOGICAL INFORMATION:

Data not available.

## XIII. DISPOSAL CONSIDERATIONS:

Dispose of in accordance with federal, state and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Ethylenediaminetetraacetic acid is designated as a hazardous substance under section 311(b)(2)(A) of the Federal Water Pollution Control Act and further regulated by the Clean Water Act Amendments of 1977 and 1978. These regulations apply to discharges of this substance. This designation includes any isomers and hydrates, as well as any solutions and mixtures containing this substance.

## XIV. TRANSPORT INFORMATION:

**D.O.T.**  
**Proper Shipping Name:** None.  
This substance is considered non-hazardous for transport.

**IATA**  
**Proper Shipping Name:** None.  
This substance is considered non-hazardous for air transport.

## XV. REGULATORY INFORMATION:

**US Regulations/Classifications:** May be harmful if contact with skin or swallowed. Irritating to eyes, respiratory system, skin.  
In case of contact with eyes, wash thoroughly and seek medical attention.

**SARA Listed:** No.  
**Canada (WHMIS):** DSL No, NDSL No.

## XVI. OTHER INFORMATION:

This product is not intended for use in humans. To the best of our knowledge, this document is accurate. It is intended to serve as a guide for safe use of this product in a laboratory setting by experienced personnel. The burden of safe use of this material rests entirely with the user. The above information is believed to be accurate but is not necessarily all-inclusive and shall be used only as a guide. Cell Signaling Technology, Inc., shall not be held liable for any damage resulting from the handling of or from contact with the above product.

# Material Safety Data Sheet (MSDS) for 2X ChIP Elution Buffer

New 03/08

## I. IDENTIFICATION:

**Product name:** 2X ChIP Elution Buffer  
**Product Catalog Number:** Component of kit #9002 and #9003  
**CAS number:** None  
**Manufacturer Supplier:** Cell Signaling Technology®  
3 Trask Lane  
Danvers, MA 01923 USA  
1-978-867-2300 TEL  
1-978-867-2400 FAX  
1-978-578-6737 Emergency Phone

## II. COMPOSITION/INFORMATION ON INGREDIENTS:

According to 29 CFR 1910.1200(d), hazardous ingredients at less than <1% and carcinogens at less than < 0.1% therefore considered non-hazardous. Any hazardous or carcinogenic ingredients meeting these criteria are listed below.

| Ingredient  | CAS#      | Percent |
|---|-----------|---------|
| Ethylenediaminetetraacetic acid (EDTA), disodium, dihydrate | 6381-92-6 | <1%     |
| Sodium dodecyl sulfate (SDS)                                | 151-21-3  | 2%      |

## III. HAZARD IDENTIFICATION: ON HAZARDOUS INGREDIENT SODIUM DODECYL SULFATE

Toxic. Harmful if contact with skin or swallowed. Irritating to eyes, respiratory system, skin.

**Target organs:** Lungs

|                     |           |                 |               |
|---------------------|-----------|-----------------|---------------|
| <b>HMIS Rating:</b> | Health: 2 | Flammability: 0 | Reactivity: 0 |
| <b>NFPA Rating:</b> | Health: 2 | Flammability: 0 | Reactivity: 0 |

## IV. FIRST AID MEASURES:

**Inhalation:** Remove to fresh air. If breathing is difficult, get medical attention.

**Ingestion:** If person is conscious, wash out mouth with water. Get medical attention.

**Skin Exposure:** Wash skin with soap and water. If irritation develops or persists, get medical attention.

**Eye Exposure:** Immediately flush eyes with water for at least 15 minutes. Get medical attention.

## V. FIRE FIGHTING MEASURES:

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not applicable.

**Explosion:** Not applicable.

**Fire Extinguishing Media:** Water spray, dry chemical, alcohol foam, or carbon dioxide.

**Firefighting:** Wear protective clothing and self-contained breathing apparatus to prevent contact with skin and eyes.

## VI. ACCIDENTAL RELEASE MEASURES:

Wear appropriate personal protective equipment as indicated in Section VIII. Absorb liquid with an absorbent material. Transfer contaminated absorbent to a closed chemical waste container for disposal. Wash spill site after material has been picked up for disposal.

## VII. HANDLING AND STORAGE:

Store at 4°C in tightly closed container.

Avoid prolonged or repeated exposure. Avoid contact with eyes, respiratory system, skin, and clothing. Wash thoroughly after handling.

## VIII. EXPOSURE CONTROLS/PERSONAL

**Ventilation System:** A system of local (fume hood) and general exhaust is recommended.

**Skin Protection:** Wear compatible chemical resistant gloves and protective clothing.

**Eye protection:** Wear chemical safety goggles. Maintain emergency eyewash and shower in work area.

## IX. EXPOSURE CONTROLS/PERSONAL PROTECTION:

|  |                    |
|--|--------------------|
| <b>Appearance:</b>                       | Colorless liquid   |
| <b>Odor:</b>                             | Odorless           |
| <b>pH :</b>                              | Data not available |
| <b>Boiling Point:</b>                    | Data not available |
| <b>Melting Point:</b>                    | Data not available |
| <b>Freezing Point:</b>                   | Data not available |
| <b>Volatile Organic Compounds (VOC):</b> | Data not available |
| <b>Autoignition temp.</b>                | Data not available |
| <b>Solubility:</b>                       | Soluble in water   |

## X. STABILITY AND REACTIVITY:

**Stability:** Stable.

**Conditions to avoid:** Strong oxidizing agents.

**Hazardous Decomposition:** Carbon monoxide, carbon dioxide, sulfur oxides, sodium oxides.

**Hazardous polymerization:** Will not occur.

## XI. TOXICOLOGICAL INFORMATION:

**Routes of Exposure:**

**Skin Exposure:** May cause skin irritation. May be harmful if absorbed through skin.

**Eye Exposure:** May cause eye irritation.

**Inhalation:** May be harmful if inhaled. Material may be irritating to mucous membrane and upper respiratory tract.

**Ingestion:** May be harmful if swallowed.

**Target organ:** Lungs.

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

## XII. ECOLOGICAL INFORMATION:

Data not available.

## XIII. DISPOSAL CONSIDERATIONS:

Dispose of in accordance with federal, state and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

## XIV. TRANSPORT INFORMATION:

**D.O.T.**

**Proper Shipping Name:** None.

This substance is considered non-hazardous for transport.

**IATA**

**Proper Shipping Name:** None.

This substance is considered non-hazardous for air transport.

## XV. REGULATORY INFORMATION:

**US Regulations/Classifications:** Toxic. Harmful if contact with skin or swallowed. Irritating to eyes, respiratory system, skin. In case of contact with eyes, wash thoroughly and seek medical attention.

**SARA Listed:** No.

**Canada (WHMIS):** DSL: No, NDSL: No.

## XVI. OTHER INFORMATION:

This product is not intended for use in humans. To the best of our knowledge, this document is accurate. It is intended to serve as a guide for safe use of this product in a laboratory setting by experienced personnel. The burden of safe use of this material rests entirely with the user. The above information is believed to be accurate but is not necessarily all-inclusive and shall be used only as a guide. Cell Signaling Technology, Inc., shall not be held liable for any damage resulting from the handling of or from contact with the above product.

# Material Safety Data Sheet (MSDS) for 0.5 M EDTA

New 03/08

## I. IDENTIFICATION:

**Product name:** 0.5 M EDTA Solution  
**Product Catalog Number:** Component of kit #9002 and #9003  
**CAS number:** None  
**Manufacturer Supplier:** Cell Signaling Technology®  
3 Trask Lane  
Danvers, MA 01923 USA  
1-978-867-2300 TEL  
1-978-867-2400 FAX  
1-978-578-6737 Emergency Phone

## II. COMPOSITION/INFORMATION ON INGREDIENTS:

According to 29 CFR 1910.1200(d), hazardous ingredients at less than <1% and carcinogens at less than < 0.1% therefore considered non-hazardous. Any hazardous or carcinogenic ingredients meeting these criteria are listed below.

| Ingredient  | CAS#      | Percent |
|---|-----------|---------|
| Ethylenediaminetetraacetic acid (EDTA), disodium, dihydrate | 6381-92-6 | 18.6%   |

## III. HAZARD IDENTIFICATION:

Irritant. Irritating to eyes, respiratory system, skin.

**Target organs:** Central nervous system.

|                     |           |                 |               |
|---------------------|-----------|-----------------|---------------|
| <b>HMIS Rating:</b> | Health: 2 | Flammability: 0 | Reactivity: 0 |
| <b>NFPA Rating:</b> | Health: 2 | Flammability: 0 | Reactivity: 0 |

## IV. FIRST AID MEASURES:

**Inhalation:** Remove to fresh air. If breathing is difficult, get medical attention.

**Ingestion:** If person is conscious, wash out mouth with water. Get medical attention.

**Skin Exposure:** Wash skin with soap and water. If irritation develops or persists, get medical attention.

**Eye Exposure:** Immediately flush eyes with water for at least 15 minutes. Get medical attention.

## V. FIRE FIGHTING MEASURES:

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not applicable.

**Explosion:** Not applicable.

**Fire Extinguishing Media:** Water spray, dry chemical, alcohol foam, or carbon dioxide.

**Firefighting:** Wear protective clothing and self-contained breathing apparatus to prevent contact with skin and eyes.

## VI. ACCIDENTAL RELEASE MEASURES:

Wear appropriate personal protective equipment as indicated in Section VIII. Absorb liquid with an absorbent material. Transfer contaminated absorbent to a closed chemical waste container for disposal. Wash spill site after material has been picked up for disposal.

## VII. HANDLING AND STORAGE:

Store at 4°C temperature in tightly closed container.

Do not breathe vapor. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling.

## VIII. EXPOSURE CONTROLS/PERSONAL

**Ventilation System:** A system of local and general exhaust is recommended.

**Skin Protection:** Wear compatible chemical resistant gloves and protective clothing.

**Eye protection:** Wear chemical safety goggles. Maintain emergency eyewash and shower in work area.

## IX. EXPOSURE CONTROLS/PERSONAL PROTECTION:

|  |                    |
|--|--------------------|
| <b>Appearance:</b>                       | Colorless liquid   |
| <b>Odor:</b>                             | Odorless           |
| <b>pH :</b>                              | Data not available |
| <b>Boiling Point:</b>                    | Data not available |
| <b>Melting Point:</b>                    | Data not available |
| <b>Freezing Point:</b>                   | Data not available |
| <b>Volatile Organic Compounds (VOC):</b> | Data not available |
| <b>Autoignition temp.</b>                | Data not available |
| <b>Solubility:</b>                       | Soluble in water   |

## X. STABILITY AND REACTIVITY:

**Stability:** Stable.

**Conditions to avoid:** Strong oxidizing agents.

**Hazardous Decomposition:** Carbon monoxide, carbon dioxide, nitrogen oxides.

**Hazardous polymerization:** Will not occur.

## XI. TOXICOLOGICAL INFORMATION:

**Skin Exposure:** May cause skin irritation. May be harmful if absorbed through skin.

**Eye Exposure:** May cause eye irritation.

**Inhalation:** May be harmful if inhaled. Material may be irritating to mucous membrane and upper respiratory tract.

**Ingestion:** May be harmful if swallowed.

**Signs and Symptoms of Exposure:** To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## XII. ECOLOGICAL INFORMATION:

Data not available.

## XIII. DISPOSAL CONSIDERATIONS:

Dispose of in accordance with federal, state and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Ethylenediaminetetraacetic acid is designated as a hazardous substance under section 311(b)(2)(A) of the Federal Water Pollution Control Act and further regulated by the Clean Water Act Amendments of 1977 and 1978. These regulations apply to discharges of this substance. This designation includes any isomers and hydrates, as well as any solutions and mixtures containing this substance.

## XIV. TRANSPORT INFORMATION:

### D.O.T.

**Proper Shipping Name:** None.

This substance is considered non-hazardous for transport.

### IATA

**Proper Shipping Name:** None.

This substance is considered non-hazardous for air transport.

## XV. REGULATORY INFORMATION:

**EU Regulations/Classifications:** Data not available.

**US Regulations/Classifications:**

Irritant. Irritating to eyes, respiratory system, skin.

In case of contact with eyes, wash thoroughly and seek medical attention.

**SARA Listed:** No.

**Canada (WHMIS):** DSL: No, NDSL: No.

## XVI. OTHER INFORMATION:

This product is not intended for use in humans. To the best of our knowledge, this document is accurate. It is intended to serve as a guide for safe use of this product in a laboratory setting by experienced personnel. The burden of safe use of this material rests entirely with the user. The above information is believed to be accurate but is not necessarily all-inclusive and shall be used only as a guide. Cell Signaling Technology, Inc., shall not be held liable for any damage resulting from the handling of or from contact with the above product.

# Material Safety Data Sheet (MSDS) for 1 M DTT

New 03/08

## I. IDENTIFICATION:

**Product name:** 1 M DTT  
**Product Catalog Number:** Component of kit #9002 and #9003  
**CAS number:** None  
**Manufacturer Supplier:** Cell Signaling Technology®  
3 Trask Lane  
Danvers, MA 01923 USA  
1-978-867-2300 TEL  
1-978-867-2400 FAX  
1-978-578-6737 Emergency Phone

## II. COMPOSITION/INFORMATION ON INGREDIENTS:

According to 29 CFR 1910.1200(d), hazardous ingredients at less than <1% and carcinogens at less than < 0.1% therefore considered non-hazardous. Any hazardous or carcinogenic ingredients meeting these criteria are listed below.

| Ingredient     | CAS#      | Percent |
|----------------|-----------|---------|
| Dithiothreitol | 3483-12-3 | 15.4%   |

## III. HAZARD IDENTIFICATION:

Irritant. Irritating to eyes, respiratory system, skin.

**Target organs:** Central nervous system.

|                     |           |                 |               |
|---------------------|-----------|-----------------|---------------|
| <b>HMIS Rating:</b> | Health: 2 | Flammability: 0 | Reactivity: 0 |
| <b>NFPA Rating:</b> | Health: 2 | Flammability: 0 | Reactivity: 0 |

## IV. FIRST AID MEASURES:

**Inhalation:** Remove to fresh air. If breathing is difficult, get medical attention.

**Ingestion:** If person is conscious, wash out mouth with water. Get medical attention.

**Skin Exposure:** Wash skin with soap and water. If irritation develops or persists, get medical attention.

**Eye Exposure:** Immediately flush eyes with water for at least 15 minutes. Get medical attention.

## V. FIRE FIGHTING MEASURES:

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not applicable.

**Explosion:** Not applicable.

**Fire Extinguishing Media:** Water spray, dry chemical, alcohol foam, or carbon dioxide.

**Firefighting:** Wear protective clothing and self-contained breathing apparatus to prevent contact with skin and eyes.

## VI. ACCIDENTAL RELEASE MEASURES:

Wear appropriate personal protective equipment as indicated in Section VIII. Absorb liquid with an absorbent material. Transfer contaminated absorbent to a closed chemical waste container for disposal. Wash spill site after material has been picked up for disposal.

## VII. HANDLING AND STORAGE:

Store at -20°C in tightly closed container.

Do not breathe vapor. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling.

## VIII. EXPOSURE CONTROLS/PERSONAL

**Ventilation System:** A system of local (fume hood) and general exhaust is recommended.

**Skin Protection:** Wear compatible chemical resistant gloves and protective clothing.

**Eye protection:** Wear chemical safety goggles. Maintain emergency eyewash and shower in work area.

## IX. EXPOSURE CONTROLS/PERSONAL PROTECTION:

|  |                    |
|--|--------------------|
| <b>Appearance:</b>                       | Liquid             |
| <b>Odor:</b>                             | Unpleasant odor    |
| <b>pH:</b>                               | Data not available |
| <b>Boiling Point:</b>                    | Data not available |
| <b>Melting Point:</b>                    | Data not available |
| <b>Freezing Point:</b>                   | Data not available |
| <b>Volatile Organic Compounds (VOC):</b> | Data not available |
| <b>Autoignition temp.</b>                | Data not available |
| <b>Solubility:</b>                       | Soluble in water   |

## X. STABILITY AND REACTIVITY:

**Stability:** Stable.

**Conditions to avoid:** Bases, oxidizing agents, reducing agents, alkali metals.

**Hazardous Decomposition:** Carbon monoxide, carbon dioxide, sulfur oxides, hydrogen sulfide gas.

**Hazardous polymerization:** Will not occur.

## XI. TOXICOLOGICAL INFORMATION:

**Skin Exposure:** Causes skin irritation. May be harmful if absorbed through skin.

**Eye Exposure:** Causes eye irritation.

**Inhalation:** May be harmful if inhaled. Material may be irritating to mucous membrane and upper respiratory tract.

**Ingestion:** May be harmful if swallowed.

**Signs and Symptoms of Exposure:** Exposure can cause CNS depression.

## XII. ECOLOGICAL INFORMATION:

Data not available.

## XIII. DISPOSAL CONSIDERATIONS:

Dispose of in accordance with federal, state and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

## XIV. TRANSPORT INFORMATION:

### D.O.T.

**Proper Shipping Name:** None.

This substance is considered non-hazardous for transport.

### IATA

**Proper Shipping Name:** None.

This substance is considered non-hazardous for air transport.

## XV. REGULATORY INFORMATION:

**EU Regulations/Classifications:** Harmful. Harmful if swallowed. Irritating to eyes, respiratory system, skin.

**US Regulations/Classifications:** Toxic. Harmful if swallowed. Irritating to eyes, respiratory system, skin. In case of contact with eyes, wash thoroughly and seek medical attention.

**SARA Listed:** No.

**Canada (WHMIS):** DSL: No, NDSL: No.

## XVI. OTHER INFORMATION:

This product is not intended for use in humans. To the best of our knowledge, this document is accurate. It is intended to serve as a guide for safe use of this product in a laboratory setting by experienced personnel. The burden of safe use of this material rests entirely with the user. The above information is believed to be accurate but is not necessarily all-inclusive and shall be used only as a guide. Cell Signaling Technology, Inc., shall not be held liable for any damage resulting from the handling of or from contact with the above product.



# Material Safety Data Sheet (MSDS) for DNA Binding Buffer

New 03/08

## I. IDENTIFICATION:

**Product name:** DNA Binding Buffer  
**Product Catalog Number:** Component of kit #9002 and #9003  
**CAS number:** None  
**Manufacturer Supplier:** Cell Signaling Technology®  
3 Trask Lane  
Danvers, MA 01923 USA  
1-978-867-2300 TEL  
1-978-867-2400 FAX  
1-978-578-6737 Emergency Phone

## II. COMPOSITION/INFORMATION ON INGREDIENTS:

According to 29 CFR 1910.1200(d), hazardous ingredients at less than <1% and carcinogens at less than < 0.1% therefore considered non-hazardous. Any hazardous or carcinogenic ingredients meeting these criteria are listed below.

| Ingredient           | CAS#    | Percent |
|----------------------|---------|---------|
| Guanidinium chloride | 50-01-1 | 25-50%  |
| Propan-2-ol          | 67-63-0 | 25-50%  |

## III. HAZARD IDENTIFICATION:

Harmful. Flammable. Harmful if swallowed. Irritating to eyes, skin.

|                     |           |                 |               |
|---------------------|-----------|-----------------|---------------|
| <b>HMIS Rating:</b> | Health: 3 | Flammability: 3 | Reactivity: 0 |
| <b>NFPA Rating:</b> | Health: 3 | Flammability: 3 | Reactivity: 0 |

## IV. FIRST AID MEASURES:

**Inhalation:** Remove to fresh air. If breathing is difficult, get medical attention.  
**Ingestion:** If person is conscious, wash out mouth with water. Get medical attention.  
**Skin Exposure:** Wash skin with soap and water. If irritation develops or persists, get medical attention.  
**Eye Exposure:** Immediately flush eyes with water for at least 15 minutes. Get medical attention.

## V. FIRE FIGHTING MEASURES:

**Flash Point:** 21-55°C (70-131°F)  
**Autoignition Temperature:** Data not available.  
**Explosion:** Data not available.  
**Fire Extinguishing Media:** Water spray, dry chemical, alcohol foam, or carbon dioxide.  
**Firefighting:** Wear protective clothing and self-contained breathing apparatus to prevent contact with skin and eyes.

## VI. ACCIDENTAL RELEASE MEASURES:

Wear appropriate personal protective equipment as indicated in Section VIII. Absorb liquid with an absorbent material. Transfer contaminated absorbent to a closed chemical waste container for disposal. Wash spill site after material has been picked up for disposal.

## VII. HANDLING AND STORAGE:

Store at room temperature in tightly closed container. Store away from ignition sources.

## VIII. EXPOSURE CONTROLS/PERSONAL

**Ventilation System:** A system of local and general exhaust is recommended.  
**Skin Protection:** Wear compatible chemical resistant gloves and protective clothing.  
**Eye protection:** Wear chemical safety goggles. Maintain emergency eyewash and shower in work area.

**Components with limit values that require monitoring at the workplace:**  
**CAS# 67-63-0: propan-2-ol:**

|             |   |
|-------------|---|
| <b>PEL:</b> | 980 mg/m <sup>3</sup> , 400 ppm   |
| <b>REL:</b> | Short term value 1225 mg/m <sup>3</sup> , 500 ppm<br>Long term value: 980 mg/m <sup>3</sup> , 400 ppm |
| <b>TLV:</b> | Short term value: 984 mg/m <sup>3</sup> , 400 ppm<br>Long term value: 492 mg/m <sup>3</sup> , 200 ppm |

## IX. EXPOSURE CONTROLS/PERSONAL PROTECTION:

|  |                              |
|--|------------------------------|
| <b>Appearance:</b>                       | Liquid                       |
| <b>Odor:</b>                             | Characteristic               |
| <b>pH at 20°C (68°F):</b>                | 7.0                          |
| <b>Boiling Point:</b>                    | Data not available           |
| <b>Melting Point:</b>                    | Data not available           |
| <b>Freezing Point:</b>                   | Data not available           |
| <b>Volatile Organic Compounds (VOC):</b> | Data not available           |
| <b>Ignition temp.</b>                    | 425°C (797°F)                |
| <b>Flash Point:</b>                      | 21-55°C (70-131°F)           |
| <b>Autoignition:</b>                     | Product is not self-igniting |
| <b>Solubility:</b>                       | Soluble in water             |

## X. STABILITY AND REACTIVITY:

**Stability:** Stable.  
**Conditions to avoid:** Acids, alkalis, oxidizing reagents.  
**Hazardous Decomposition:** Data not available.  
**Hazardous polymerization:** Data not available.

## XI. TOXICOLOGICAL INFORMATION:

**Skin Exposure:** Causes skin irritation. May be harmful if absorbed through skin.  
**Eye Exposure:** Causes eye irritation.  
**Inhalation:** Harmful if inhaled. Causes irritation to mucous membrane and upper respiratory tract.  
**Ingestion:** Harmful if swallowed.

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

## XII. ECOLOGICAL INFORMATION:

Data not available.

## XIII. DISPOSAL CONSIDERATIONS:

Dispose of in accordance with federal, state and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

## XIV. TRANSPORT INFORMATION:

### D.O.T.

**Proper Shipping Name:** ISOPROPANOL (ISOPROPYL ALCOHOL), Solution  
**UN Number:** UN1219  
**Hazard Class:** 3 Flammable Liquids  
**Packing Group:** Packing Group II  
**Hazard Label:** 3

### IATA

**Proper Shipping Name:** ISOPROPANOL (ISOPROPYL ALCOHOL), Solution  
**UN Number:** UN1219  
**ICAO/IATA Class:** 3 Flammable Liquids  
**Packing Group:** II  
**Hazard Label:** 3

## XV. REGULATORY INFORMATION:

**US Regulations/Classifications:**  
Harmful. Flammable.  
Harmful if swallowed. Irritating to eyes and skin.  
In case of contact with eyes, wash thoroughly and seek medical attention.  
**SARA 313 listed:** 67-63-0 propan-2-ol  
**IARC (international Agency for Research on Cancer):** 67-63-0 propan-2-ol

## XVI. OTHER INFORMATION:

This product is not intended for use in humans. To the best of our knowledge, this document is accurate. It is intended to serve as a guide for safe use of this product in a laboratory setting by experienced personnel. The burden of safe use of this material rests entirely with the user. The above information is believed to be accurate but is not necessarily all-inclusive and shall be used only as a guide. Cell Signaling Technology, Inc., shall not be held liable for any damage resulting from the handling of or from contact with the above product.

# Material Safety Data Sheet (MSDS) for Protease Inhibitor Cocktail (200X)

New 03/08



## I. IDENTIFICATION:

**Product name:** Protease Inhibitor Cocktail (200X)  
**Product Catalog Number:** Component of kit #9002 and #9003  
**CAS number:** None  
**Manufacturer Supplier:** Cell Signaling Technology®  
3 Trask Lane  
Danvers, MA 01923 USA  
1-978-867-2300 TEL  
1-978-867-2400 FAX  
1-978-578-6737 Emergency Phone

## II. COMPOSITION/INFORMATION ON INGREDIENTS:

| Ingredient  | CAS#        | Percent |
|---|-------------|---------|
| Dimethyl sulfoxide (DMSO)                               | 67-68-5     | >96%    |
| 4-(2-aminoethyl)benzenesulfonyl fluoride hydrochloride  | 30827-99-7  | 2.49%   |
| Aprotinin   | 9087-70-1   | 0.05%   |
| Bestatin hydrochloride                                  | 65391-42-6  | 0.12%   |
| N-(trans-epoxysuccinyl)-L-leucine 4-guanidinobutylamide | 66701-25-5  | 0.09%   |
| Leupeptin hemisulfate                                   | 103476-89-7 | 0.1%    |
| Pepstatin A   | 26305-03-3  | 0.1%    |

## III. HAZARD IDENTIFICATION:

Combustible.

**Target organs:** Eyes. Skin. Readily absorbed through skin.

|                     |           |                 |               |
|---------------------|-----------|-----------------|---------------|
| <b>HMIS Rating:</b> | Health: 0 | Flammability: 2 | Reactivity: 0 |
| <b>NFPA Rating:</b> | Health: 0 | Flammability: 2 | Reactivity: 0 |

## IV. FIRST AID MEASURES:

**Inhalation:** Remove to fresh air. If breathing is difficult, get medical attention.

**Ingestion:** If person is conscious, wash out mouth with water. Get medical attention.

**Skin Exposure:** Wash skin with soap and water. If irritation develops or persists, get medical attention.

**Eye Exposure:** Immediately flush eyes with water for at least 15 minutes. Get medical attention.

## V. FIRE FIGHTING MEASURES:

**Flash Point:** 188.6°F, 87°C Method: closed cup.

**Autoignition Temperature:** Not applicable.

**Explosion:** Not applicable.

**Fire Extinguishing Media:** Water spray, dry chemical, alcohol foam, or carbon dioxide.

**Firefighting:** Wear protective clothing and self-contained breathing apparatus to prevent contact with skin and eyes.

**Note:** Combustible liquid. Emits toxic fumes under fire conditions.

## VI. ACCIDENTAL RELEASE MEASURES:

Wear appropriate personal protective equipment as indicated in Section VIII. Absorb liquid with an absorbent material. Transfer contaminated absorbent to a closed chemical waste container for disposal. Wash spill site after material has been picked up for disposal.

## VII. HANDLING AND STORAGE:

Store at -20°C in tightly closed container under inert gas. Hygroscopic. Avoid prolonged or repeated exposure. Avoid contact with eyes, respiratory system, skin, and clothing. Wash thoroughly after handling. DMSO is readily absorbed through the skin and may carry materials with known or unknown toxicological properties into the body.

## VIII. EXPOSURE CONTROLS/PERSONAL

**Ventilation System:** A system of local and general exhaust is recommended.

**Skin Protection:** Wear compatible chemical resistant gloves and protective clothing.

**Eye protection:** Wear chemical safety goggles. Maintain emergency eyewash and shower in work area.

## IX. EXPOSURE CONTROLS/PERSONAL PROTECTION:

|  |                    |
|--|--------------------|
| <b>Appearance:</b>                       | Liquid             |
| <b>Odor:</b>                             | Data not available |
| <b>pH:</b>                               | Data not available |
| <b>Boiling Point:</b>                    | Data not available |
| <b>Melting Point:</b>                    | Data not available |
| <b>Freezing Point:</b>                   | Data not available |
| <b>Volatile Organic Compounds (VOC):</b> | Data not available |
| <b>Autoignition temp.</b>                | Data not available |
| <b>Solubility:</b>                       | Data not available |

## X. STABILITY AND REACTIVITY:

**Stability:** Stable.

**Conditions to avoid:** Exposure to moisture may affect product quality.

**Hazardous Decomposition:** Acid chlorides, phosphorus halides, strong acids, strong oxidizing agents, strong reducing agents.

**Hazardous polymerization:** Will not occur.

## XI. TOXICOLOGICAL INFORMATION:

**Skin Exposure:** May cause skin irritation. May be harmful if absorbed through skin.

**Eye Exposure:** May cause eye irritation.

**Inhalation:** May be harmful if inhaled. Material may be irritating to mucous membrane and upper respiratory tract.

**Ingestion:** May be harmful if swallowed.

**Target organs:** Eyes, skin.

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

## XII. ECOLOGICAL INFORMATION:

Data not available.

## XIII. DISPOSAL CONSIDERATIONS:

Dispose of in accordance with federal, state and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

## XIV. TRANSPORT INFORMATION:

### D.O.T.

**Proper Shipping Name:** Combustible liquid, n.o.s  
UN# NA1993.

**Class:** Combustible Liquid.

**Packing Group:** Packing Group III.

**Hazard Label:** None.

**PIH:** Not PIH.

### IATA

**Proper Shipping Name:** None.

This substance is considered non-hazardous for air transport.

## XV. REGULATORY INFORMATION:

**US Regulations/Classifications:** Combustible.

**Target organs:** Eyes. Skin. Readily absorbed through skin.

**SARA Listed:** No.

**Canada (WHMIS):** DSL: No, NDSL: No.

## XVI. OTHER INFORMATION:

This product is not intended for use in humans. To the best of our knowledge, this document is accurate. It is intended to serve as a guide for safe use of this product in a laboratory setting by experienced personnel. The burden of safe use of this material rests entirely with the user. The above information is believed to be accurate but is not necessarily all-inclusive and shall be used only as a guide. Cell Signaling Technology, Inc., shall not be held liable for any damage resulting from the handling of or from contact with the above product.

# Material Safety Data Sheet (MSDS) for RNase A Solution

New 03/08

## I. IDENTIFICATION:

**Product name:** RNase A solution  
**Product Catalog Number:** Component of kit #9002 and #9003  
**CAS number:** None  
**Manufacturer Supplier:** Cell Signaling Technology®  
3 Trask Lane  
Danvers, MA 01923 USA  
1-978-867-2300 TEL  
1-978-867-2400 FAX  
1-978-578-6737 Emergency Phone

## II. COMPOSITION/INFORMATION ON INGREDIENTS:

According to 29 CFR 1910.1200(d), hazardous ingredients at less than <1% and carcinogens at less than <0.1% therefore considered non-hazardous. Any hazardous or carcinogenic ingredients meeting these criteria are listed below.

| Ingredient | CAS#    | Percent |
|------------|---------|---------|
| Glycerol   | 56-81-5 | 50%     |

## III. HAZARD IDENTIFICATION:

**Emergency Overview of Hazardous ingredient:** Glycerol (CAS# 56-81-5)

**Caution:** Avoid contact and inhalation.  
Irritant. Irritating to eyes, respiratory system, skin.

**NFPA Rating:** Health: 1 Flammability: 0 Reactivity: 0

**Target organ:** Kidneys.

## IV. FIRST AID MEASURES:

**Inhalation:** Remove to fresh air. If breathing is difficult, get medical attention.  
**Ingestion:** If swallowed, rinse mouth with water provided person is conscious. Get medical attention.  
**Skin Exposure:** In case of contact, wash skin with soap and water.  
**Eye Exposure:** In case of contact with eyes, immediately flush eyes with water for at least 15 minutes. Get medical attention.

## V. FIRE FIGHTING MEASURES:

**Flash Point:** Data not available.  
**Autoignition Temperature:** Data not available.  
**Fire Extinguishing Media:** Water spray, dry chemical, alcohol foam, or carbon dioxide.  
**Firefighting:** Wear protective clothing and self-contained breathing apparatus to prevent contact with skin and eyes.

## VI. ACCIDENTAL RELEASE MEASURES:

Wear appropriate personal protective equipment as indicated in Section VIII. Absorb liquid with an absorbent material. Transfer contaminated absorbent to a closed chemical waste container for disposal. Wash spill site after material has been picked up for disposal.

## VII. HANDLING AND STORAGE:

Store at -20°C in tightly closed container. Avoid inhalation and contact with eyes and skin. Avoid prolonged or repeated exposure.

## VIII. EXPOSURE CONTROLS/PERSONAL

**Ventilation System:** A system of local and general exhaust is recommended.  
**Skin Protection:** Wear compatible chemical resistant gloves and protective clothing.  
**Eye protection:** Wear chemical safety goggles. Maintain emergency eyewash and shower in work area.

## IX. EXPOSURE CONTROLS/PERSONAL PROTECTION:

**Physical State:** Liquid  
**Appearance:** Colorless  
**Odor:** Odorless  
**pH :** 7.5  
**Boiling Point:** Data not available  
**Melting Point:** Data not available  
**Volatile Organic Compounds (VOC):** Data not available  
**Solubility in water:** Readily miscible in water

## X. STABILITY AND REACTIVITY:

**Stability:** Stable.  
**Conditions to avoid:** Strong oxidizing agents.  
**Hazardous Decomposition:** May form carbon dioxide and carbon monoxide.

## XI. TOXICOLOGICAL INFORMATION:

May cause skin irritation.  
May be toxic if absorbed through skin or ingested.  
May cause eye irritation.

**Target organs:** Kidneys.

Prolonged exposure may cause nausea, headache, and vomiting.

## XII. ECOLOGICAL INFORMATION:

Data not available.

## XIII. DISPOSAL CONSIDERATIONS:

Dispose of in accordance with federal, state and local environmental regulations.

## XIV. TRANSPORT INFORMATION:

### D.O.T.

**Proper Shipping Name:** None.

This substance is considered non-hazardous for transport.

### IATA

**Proper Shipping Name:** None.

This substance is considered non-hazardous for air transport.

## XV. REGULATORY INFORMATION:

**EU Regulations/Classifications:** Data not available.

**US Regulations/Classifications:** Irritant. Irritating to eyes, respiratory system, skin.

**Caution:** Avoid contact and inhalation.

**Target organ(s):** Kidneys.

In case of contact with eyes, wash thoroughly and seek medical attention

**SARA Listed:** No.

**Canada (WHMIS):** DSL: No, NDSL: No.

## XVI. OTHER INFORMATION:

This product is not intended for use in humans. To the best of our knowledge, this document is accurate. It is intended to serve as a guide for safe use of this product in a laboratory setting by experienced personnel. The burden of safe use of this material rests entirely with the user. The above information is believed to be accurate but is not necessarily all-inclusive and shall be used only as a guide. Cell Signaling Technology, Inc., shall not be held liable for any damage resulting from the handling of or from contact with the above product.

# Material Safety Data Sheet (MSDS) for Micrococcal Nuclease

New 03/08

## I. IDENTIFICATION:

**Product name:** Micrococcal Nuclease  
**Product Catalog Number:** Component of kit #9002 and #9003  
**CAS number:** None  
**Manufacturer Supplier:** Cell Signaling Technology®  
3 Trask Lane  
Danvers, MA 01923 USA  
1-978-867-2300 TEL  
1-978-867-2400 FAX  
1-978-578-6737 Emergency Phone

## II. COMPOSITION/INFORMATION ON INGREDIENTS:

According to 29 CFR 1910.1200(d), hazardous ingredients at less than <1% and carcinogens at less than <0.1% therefore considered non-hazardous. Any hazardous or carcinogenic ingredients meeting these criteria are listed below.

This product may contain the following hazardous ingredients:

| Ingredient | CAS#    | Percent |
|------------|---------|---------|
| Glycerol   | 56-81-5 | 50%     |

## III. HAZARD IDENTIFICATION:

Emergency Overview of Hazardous ingredient: Glycerol (CAS# 56-81-5)  
Irritant. Irritating to eyes, respiratory system, skin.

**Caution:** Avoid contact and inhalation.

**Target organ:** Kidneys.

**NFPA Rating:** Health: 3 Flammability: 3 Reactivity: 0

## IV. FIRST AID MEASURES:

**Inhalation:** Remove to fresh air. If breathing is difficult, get medical attention.

**Ingestion:** If person is conscious, wash out mouth with water. Get medical attention.

**Skin Exposure:** In case of contact, wash skin with soap and water.

**Eye Exposure:** In case of contact with eyes, immediately flush eyes with water for at least 15 minutes. Get medical attention.

## V. FIRE FIGHTING MEASURES:

**Flash Point:** Data not available.

**Autoignition Temperature:** Data not available.

**Fire Extinguishing Media:** Water spray, dry chemical, alcohol foam, or carbon dioxide.

**Firefighting:** Wear protective clothing and self-contained breathing apparatus to prevent contact with skin and eyes.

## VI. ACCIDENTAL RELEASE MEASURES:

Wear appropriate personal protective equipment as indicated in Section VIII. Absorb liquid with an absorbent material. Transfer contaminated absorbent to a closed chemical waste container for disposal. Wash spill site after material has been picked up for disposal.

## VII. HANDLING AND STORAGE:

Store at -20°C in tightly closed container. Avoid inhalation and contact with eyes and skin. Avoid prolonged or repeated exposure.

## VIII. EXPOSURE CONTROLS/PERSONAL

**Ventilation System:** A system of local and general exhaust is recommended.

**Skin Protection:** Wear compatible chemical resistant gloves and protective clothing.

**Eye protection:** Wear chemical safety goggles. Maintain emergency eyewash and shower in work area.

## IX. EXPOSURE CONTROLS/PERSONAL PROTECTION:

|  |                           |
|--|---------------------------|
| <b>Physical State:</b>                   | Liquid                    |
| <b>Appearance:</b>                       | Colorless                 |
| <b>Odor:</b>                             | Odorless                  |
| <b>pH:</b>                               | 7.4 at 25°C               |
| <b>Boiling Point:</b>                    | Data not available        |
| <b>Melting Point:</b>                    | Data not available        |
| <b>Volatile Organic Compounds (VOC):</b> | Data not available        |
| <b>Solubility:</b>                       | Readily miscible in water |

## X. STABILITY AND REACTIVITY:

**Stability:** Stable.

**Conditions to avoid:** Strong oxidizing reagents.

**Hazardous Decomposition:** May form carbon dioxide and carbon monoxide.

## XI. TOXICOLOGICAL INFORMATION:

May cause skin irritation.

May be toxic if absorbed through skin or ingested.

May cause eye irritation.

**Target organs:** Kidneys.

Prolonged exposure may cause nausea, headache, and vomiting.

## XII. ECOLOGICAL INFORMATION:

Data not available.

## XIII. DISPOSAL CONSIDERATIONS:

Dispose of in accordance with federal, state and local environmental regulations.

## XIV. TRANSPORT INFORMATION:

### D.O.T.

**Proper Shipping Name:** None.

This substance is considered non-hazardous for transport.

### IATA

**Proper Shipping Name:** None.

This substance is considered non-hazardous for transport.

## XV. REGULATORY INFORMATION:

**EU Regulations/Classifications:** Data not available.

**US Regulations/Classifications:**

Irritant. Irritating to eyes, respiratory system, skin.

**Caution:** Avoid contact and inhalation.

**Target organ(s):** Kidneys.

In case of contact with eyes, wash thoroughly and seek medical attention.

**SARA Listed:** No.

**Canada (WHMIS):** DSL No, NDSL No.

## XVI. OTHER INFORMATION:

This product is not intended for use in humans. To the best of our knowledge, this document is accurate. It is intended to serve as a guide for safe use of this product in a laboratory setting by experienced personnel. The burden of safe use of this material rests entirely with the user. The above information is believed to be accurate but is not necessarily all-inclusive and shall be used only as a guide. Cell Signaling Technology, Inc., shall not be held liable for any damage resulting from the handling of or from contact with the above product.

# Material Safety Data Sheet (MSDS) for Proteinase K Solution

New 03/08

## I. IDENTIFICATION:

**Product name:** Proteinase K Solution  
**Product Catalog Number:** Component of kit #9002 and #9003  
**CAS number:** None  
**Manufacturer Supplier:** Cell Signaling Technology®  
3 Trask Lane  
Danvers, MA 01923 USA  
1-978-867-2300 TEL  
1-978-867-2400 FAX  
1-978-578-6737 Emergency Phone

## II. COMPOSITION/INFORMATION ON INGREDIENTS:

According to 29 CFR 1910.1200(d), hazardous ingredients at less than <1% and carcinogens at less than <0.1% therefore considered non-hazardous. Any hazardous or carcinogenic ingredients meeting these criteria are listed below.

| Ingredient | CAS#    | Percent |
|------------|---------|---------|
| Glycerol   | 56-81-5 | 50%     |

## III. HAZARD IDENTIFICATION:

**Emergency Overview of Hazardous ingredient:** Glycerol (CAS# 56-81-5)  
Irritant. Irritating to eyes, respiratory system, skin.

**Caution:** Avoid contact and inhalation.

**NFPA Rating:** Health: 1 Flammability: 0 Reactivity: 0

**Target organ:** Kidneys.

## IV. FIRST AID MEASURES:

**Inhalation:** Remove to fresh air. If breathing is difficult, get medical attention.  
**Ingestion:** If person is conscious, wash out mouth with water. Get medical attention.  
**Skin Exposure:** Wash skin with soap and water. If irritation develops or persists, get medical attention.  
**Eye Exposure:** Immediately flush eyes with water for at least 15 minutes. Get medical attention.

## V. FIRE FIGHTING MEASURES:

**Flash Point:** Data not available.  
**Autoignition Temperature:** Data not available.  
**Fire Extinguishing Media:** Water spray, dry chemical, alcohol foam, or carbon dioxide.  
**Firefighting:** Wear protective clothing and self-contained breathing apparatus to prevent contact with skin and eyes.

## VI. ACCIDENTAL RELEASE MEASURES:

Wear appropriate personal protective equipment as indicated in Section VIII. Absorb liquid with an absorbent material. Transfer contaminated absorbent to a closed chemical waste container for disposal. Wash spill site after material has been picked up for disposal.

## VII. HANDLING AND STORAGE:

Avoid inhalation and contact with eyes and skin. Avoid prolonged or repeated exposure. Store at -20°C in tightly closed container.

## VIII. EXPOSURE CONTROLS/PERSONAL

**Ventilation System:** A system of local and general exhaust is recommended.  
**Skin Protection:** Wear compatible chemical resistant gloves and protective clothing.  
**Eye protection:** Wear chemical safety goggles. Maintain emergency eyewash and shower in work area.

## IX. EXPOSURE CONTROLS/PERSONAL PROTECTION:

**Physical State:** Liquid  
**Appearance:** Colorless  
**Odor:** Odorless  
**pH:** 7.5 at 25°C  
**Boiling Point:** Data not available  
**Melting Point:** Data not available  
**Volatile Organic Compounds (VOC):** Data not available  
**Solubility in water:** Readily miscible in water

## X. STABILITY AND REACTIVITY:

**Stability:** Stable.  
**Conditions to avoid:** Strong oxidizing agents.  
**Hazardous Decomposition:** May form carbon dioxide and carbon monoxide.

## XI. TOXICOLOGICAL INFORMATION:

May cause skin irritation.  
May be toxic if absorbed through skin or ingested.  
May cause eye irritation.

**Target organs:** Kidneys

Prolonged exposure may cause nausea, headache, and vomiting.

## XII. ECOLOGICAL INFORMATION:

Data not available.

## XIII. DISPOSAL CONSIDERATIONS:

Dispose of in accordance with federal, state and local environmental regulations.

## XIV. TRANSPORT INFORMATION:

### D. O. T.

**Proper Shipping Name:** None.

This substance is considered non-hazardous for transport.

### IATA

**Proper Shipping Name:** None.

This substance is considered non-hazardous for air transport.

## XV. REGULATORY INFORMATION:

**EU Regulations/Classifications:** Data not available.

**US Regulations/Classifications:** Irritant. Irritating to eyes, respiratory system, skin.

**Caution:** Avoid contact and inhalation.

**Target organ(s):** Kidneys.

In case of contact with eyes, wash thoroughly and seek medical attention

**SARA Listed:** No.

**Canada (WHMIS):** DSL: No, NDSL: No.

## XVI. OTHER INFORMATION:

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