



Safety Data Sheet (SDS) According to the OSHA Hazard Communication Standard 29 CFR 1910.1200

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SECTION 1. Identification

Product identifier

Product No 14209
Product name DNA Purification Buffers and Spin Columns (ChIP, CUT&RUN, CUT&Tag)
Kit Component 10007: DNA Binding Buffer
10008: DNA Wash Buffer
10009: DNA Elution Buffer
10010: DNA Purification Columns and Collection Tubes

Hazardous Components

10007: DNA Binding Buffer
UN number UN1219

Recommended use of the chemical and restrictions on use

Identified uses This product is intended for research purposes only.

Manufacturer, importer, supplier

Manufacturer address Cell Signaling Technology, Inc.
3 Trask Lane
Danvers, MA 01923
United States
TEL: +1 978 867 2300
FAX: +1 978 867 2400
Website www.cellsignal.com
Email address support@cellsignal.com
Emergency telephone number In case of emergency call CHEMTREC 1-800-424-9300

SECTION 2. Hazard(s) identification

Classification

Classification and label elements described below are inclusive of all hazards of the combined kit. The most severe classifications are listed for each endpoint. Refer to individual kit component SDS for classification and label elements for each component present in the kit. This substance/mixture is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Acute oral toxicity	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Specific target organ toxicity - single exposure (STOT SE)	Category 3
Flammable liquids	Category 2

GHS Label elements, including precautionary statements**Signal Word**

Danger.

Hazard statement(s)

Highly flammable liquid and vapor.

Harmful if swallowed.

Causes skin irritation.

Causes serious eye irritation.

May cause drowsiness or dizziness.

Precautionary Statement(s)

Wash face, hands and any exposed skin thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

Avoid breathing dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.

Do not eat, drink or smoke when using this product.

Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

Keep container tightly closed.

Ground/Bond container and receiving equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Use explosion-proof electrical/ventilating/lighting/equipment.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

Wash contaminated clothing before reuse.

If skin irritation occurs: Get medical advice/attention.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Call a POISON CENTER or doctor/physician if you feel unwell

In case of fire: Use CO₂, dry chemical, or foam to extinguish

Store in a well-ventilated place. Keep cool.

Store locked up.

Dispose of contents/container to an approved waste disposal plant.

Supplementary Hazard Information**Hazards not otherwise classified (HNOC)****10007: DNA Binding Buffer** - Reacts vigorously with bleach and releases toxic gas.**SECTION 3. Composition/information on ingredients****Kit Component****10007: DNA Binding Buffer**

DANGER: Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. Highly flammable liquid and vapor.

Chemical name	CAS No	Weight-%
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guanidinium chloride	50-01-1	30-60
propan-2-ol	67-63-0	30-60

NOTE: Reacts vigorously with bleach and releases toxic gas

Kit Component

- 10008: DNA Wash Buffer**
- 10009: DNA Elution Buffer**
- 10010: DNA Purification Columns and Collection Tubes**

These products do not contain substances at concentrations requiring disclosure under 29 CFR 1910.1200 (OSHA Hazard Communication Standard).

SECTION 4. First-aid measures

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately if symptoms occur.

Skin contact Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If skin irritation occurs, get medical advice/attention.

Inhalation IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately if symptoms occur.

Ingestion Do NOT induce vomiting. Clean mouth with water and afterwards drink plenty of water. Get medical attention immediately if symptoms occur.

Most important symptoms and effects, both acute and delayed

Irritating to eyes and skin. Liquid, aerosols and vapors of this product are irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation and/or a feeling like that of fine dust in the eyes. Vapors may cause drowsiness and dizziness.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Advice for emergency responders

General advice Use first aid treatment according to the nature of the injury. When symptoms persist or in all cases of doubt seek medical advice. Show this safety data sheet to the doctor in attendance.

Protection of first-aiders Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves

SECTION 5. Fire-fighting measures

Extinguishing media

Suitable Extinguishing Media Carbon dioxide (CO₂), Dry powder, Foam.

Specific hazards arising from the chemical

Thermal decomposition can lead to release of toxic and corrosive gases/vapors. In the event of fire and/or explosion do not breathe fumes.

Hazardous Combustion Products Carbon oxides (CO_x). Nitrogen oxides (NO_x). Hydrogen chloride.

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Avoid contact with skin, eyes and clothing. Evacuate personnel to safe areas. Use personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Other information No information available.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Cover liquid spill with sand, earth or other noncombustible absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly. Prevent product from entering drains.

SECTION 7. Handling and storage

Precautions for safe handling

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Ensure adequate ventilation. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Wear personal protective equipment.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Packaging material No information available.

Incompatible products Bleach, Strong acids, Strong bases, Oxidizing agents.

SECTION 8. Exposure controls/personal protection

Control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH REL
propan-2-ol	STEL 400 ppm TWA : 200 ppm	TWA : 400 ppm TWA : 980 mg/m ³	IDLH : 2000 ppm TWA : 400 ppm TWA : 980 mg/m ³ STEL: 500 ppm STEL: 1225 mg/m ³

Appropriate engineering controls

Showers, eyewash stations, and ventilation systems.

Individual protection measures, such as personal protective equipment

Personal protective equipment (PPE) needs to be selected depending on the implemented engineering controls, frequency/duration of work activities and the concentrations of the hazardous substance.

Eye/face protection

Tightly fitting safety goggles.

Skin and body protection

Wear protective gloves/clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Keep away from food, drink and animal feeding stuffs. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Provide regular cleaning of equipment, work area and clothing. Wash hands and face before breaks and immediately after handling the product.

SECTION 9. Physical and chemical properties

Information on the known physical chemical properties of each component within Kit are given below. If not included, information is either not available or not applicable. Refer to individual kit component SDS for further information.

Information on basic physical and chemical properties

Kit Component	10007: DNA Binding Buffer
Physical state	Liquid
Appearance	Clear
Color	Colorless
Odor	Alcohol-like odor
pH	7.0 (20 °C)
Flash point	12°C (Isopropanol)
Autoignition temp (°C) VALUE	425
Upper flammability limit	12%
Lower flammability limit	2%

Kit Component	10008: DNA Wash Buffer
Physical state	Liquid
Appearance	Clear
Color	Colorless
pH	7.7

Kit Component	10009: DNA Elution Buffer
Physical state	Liquid
Appearance	Clear
Color	Colorless
pH	8.5

SECTION 10. Stability and reactivity

Reactivity

No information available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Hazardous reactions	Reacts vigorously with bleach and releases toxic gas.
Hazardous polymerization	None under normal processing.

Conditions to Avoid

Extremes of temperature and direct sunlight. Heat, flames and sparks.

Incompatible Materials

Bleach. Strong acids. Strong bases. Oxidizing agents.

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating and toxic gases and vapors

SECTION 11. Toxicological information

Information on likely routes of exposure

Product Information

Refer to kit component SDS for full toxicological information. This material should only be handled by, or under the close supervision of, those properly qualified in the handling and use of potentially hazardous chemicals. It should be borne in mind that the toxicological and physiological properties of this compound is not well defined.

Inhalation

Kit Component	10007: DNA Binding Buffer
Inhalation	May cause drowsiness and dizziness.

Eye contact

Kit Component	10007: DNA Binding Buffer
Eye contact	Expected to be an irritant based on components.

Skin contact

Kit Component	10007: DNA Binding Buffer
Skin contact	Expected to be an irritant based on components.

Ingestion

Kit Component	10007: DNA Binding Buffer
Ingestion	Harmful if swallowed.

Information on toxicological effects

Kit Component	10007: DNA Binding Buffer
ATEmix (oral)	867 mg/kg
ATEmix (dermal)	25600 mg/kg

Component Information

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
propan-2-ol	5000 mg/kg (Rat)	12800 mg/kg (Rabbit)	16000 ppm (Rat) 8h
guanidinium chloride	475 mg/kg (Rat)	-	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Symptoms Irritating to eyes and skin. Liquid, aerosols and vapors of this product are irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation and/or a feeling like that of fine dust in the eyes. Vapors may cause drowsiness and dizziness.

Skin and Eye Corrosion/Irritation

Kit Component **10007: DNA Binding Buffer**
 Serious eye damage/eye irritation Causes serious eye irritation.
 Skin corrosion/irritation Causes skin irritation

Sensitization No information available

Mutagenic effects No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen

Chemical name	IARC	NTP	OSHA
propan-2-ol 67-63-0	3	-	-

Reproductive toxicity No information available.

Systemic Target Organ Toxicity (STOT)

Kit Component **10007: DNA Binding Buffer**
 STOT - single exposure May cause drowsiness or dizziness
 Target Organ Effects Central nervous system (CNS)

Aspiration Hazard No information available.

SECTION 12. Ecological information**Ecotoxicity****Component Information**

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
propan-2-ol	EC50 1000 mg/L (Desmodesmus subspicatus) 96 h EC50 1000 mg/L (Desmodesmus subspicatus) 72 h	LC50 9640 mg/L (Pimephales promelas) 96 h LC50 1400000 µg/L (Lepomis macrochirus) 96 h LC50 11130 mg/L (Pimephales promelas) 96 h	EC50 13299 mg/L (Daphnia magna) 48 h
guanidinium chloride	-	LC50 1758 mg/L (Leuciscus idus) 48 h	-

Persistence and degradability

Kit Component **10007: DNA Binding Buffer**

Persistence and degradability Readily biodegradable

Bioaccumulation

Kit Component	10007: DNA Binding Buffer
Bioaccumulation	Not likely to bioaccumulate

Chemical name	Octanol-Water Partition Coefficient
propan-2-ol	0.05
guanidinium chloride	-1.7

Mobility No information available

Other adverse effects

No information available.

SECTION 13. Disposal considerations**Waste Disposal Methods**

Dispose of in accordance with all applicable national environmental laws and regulations.

Disposal considerations

Do not empty into drains; dispose of this material and its container in a safe way. Dispose of wastes in an approved waste disposal facility.

SECTION 14. Transport information

This material is subject to regulation as a hazardous material for shipping:

DOT

UN number	UN1219
UN proper shipping name	Isopropanol
Transport hazard class(es)	3
Packing group	II

IATA

UN number	UN1219
UN proper shipping name	Isopropanol
Transport hazard class(es)	3
Packing group	II
Excepted Quantity	E2

SECTION 15. Regulatory information**North American Inventory Listing**

Chemical name	TSCA 8(b)	TSCA 12(b)	DSL	NDSL
propan-2-ol	Listed	Not Listed	Listed	Not Listed
guanidinium chloride	Listed	Not Listed	Listed	Not Listed

SARA 313

Chemical name	CAS No	SARA 313 - Threshold Values %
propan-2-ol	67-63-0	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
propan-2-ol	Listed	Listed	Listed

SECTION 16. Other information

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Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

End of Safety Data Sheet