



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

Issuing Date: 2018-01-11

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Version: 2

SECTION 1. Identification

Product identifier

Product No 4339
Product name Cyclic AMP XP® Assay Kit
Kit Component
74746: cAMP Rabbit mAb Coated Microwells
55401: cAMP-HRP Conjugate
38720: cAMP Standard (2.4uM)
7004: TMB Substrate
7002: STOP Solution
9801: ELISA Wash Buffer (20X)
9803: Cell Lysis Buffer (10X)

Hazardous Components

7002: STOP Solution
9801: ELISA Wash Buffer (20X)
9803: Cell Lysis Buffer (10X)
55401: cAMP-HRP Conjugate
UN number UN3265

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.

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

Skin sensitization	Category 1
Chronic aquatic toxicity	Category 3

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

Danger

Hazard statement(s)

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Harmful to aquatic life with long lasting effects.

Precautionary Statement(s)

Do not breathe dust/fume/gas/mist/vapors/spray.

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

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

Contaminated work clothing should not be allowed out of the workplace.

Avoid release to the environment.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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

If skin irritation occurs: Get medical advice/attention

Take off contaminated clothing and wash before reuse

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

Immediately call a POISON CENTER or doctor/physician.

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

Immediately call a POISON CENTER or doctor/physician

Store locked up.

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

Supplementary Hazard Information**Hazards not otherwise classified (HNOC)**

Not applicable.

SECTION 3. Composition/information on ingredients**Kit Component** 55401: cAMP-HRP Conjugate

WARNING: May cause an allergic skin reaction.

Chemical name	CAS No	Weight-%
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	0.005-0.025
copper dinitrate	3251-23-8	0.005

Kit Component 7002: STOP Solution

DANGER: Causes severe skin burns and eye damage. May cause an allergic skin reaction.

Chemical name	CAS No	Weight-%
maleic acid	110-16-7	3-7

Kit Component 9801: ELISA Wash Buffer (20X)

WARNING: May cause an allergic skin reaction.

Chemical name	CAS No	Weight-%
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1)	55965-84-9	0.005-0.025

Kit Component 9803: Cell Lysis Buffer (10X)

DANGER: Causes skin irritation. Causes serious eye damage. Harmful to aquatic life with long lasting effects.

Chemical name	CAS No	Weight-%
polyethylene glycol	9002-93-1	10
p-(1,1,3,3-tetramethylbutyl)phenylether		
tetrasodium pyrophosphate, decahydrate	13472-36-1	0.1-1

Kit Component 74746: cAMP Rabbit mAb Coated Microwells
38720: cAMP Standard (2.4uM)
7004: TMB Substrate

This product does 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. If symptoms persist, call a physician.
Skin contact	Immediate medical attention is required. Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If skin irritation or rash occurs: Get medical advice/attention.
Inhalation	Immediate medical attention is required. Move to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Ingestion	Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Immediate medical attention is required.

Most important symptoms and effects, both acute and delayed

Significant esophageal or gastrointestinal tract irritation or burns may occur following ingestion. Respiratory tract irritation, if severe, can progress to pulmonary edema which may be delayed in onset up to 24 to 72 hours after exposure in some cases. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. 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.

Indication of any immediate medical attention and special treatment needed

May cause sensitization in susceptible persons. Treat symptomatically.

Advice for emergency responders

General advice
Protection of first-aiders

For further assistance, contact your local Poison Control Center.
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 Foam
Carbon dioxide (CO₂)
Dry powder
Water spray

Unsuitable Extinguishing Media None.

Specific hazards arising from the chemical

The product causes irritation of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes.

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 Use personal protective equipment. Ensure adequate ventilation. Avoid contact with the skin and the eyes. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Other information No information available.

Environmental precautions

Should not be released into the environment. Prevent entry into waterways, sewers, basements or confined areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. Do not flush into surface water or sanitary sewer system.

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 Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. After cleaning, flush away traces with water. Prevent product from entering drains.

SECTION 7. Handling and storage

Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions	Keep containers tightly closed in a cool, well-ventilated place. Protect from light.
Packaging material	No information available.
Incompatible products	Strong oxidizing agents, Metals, Strong acids, Strong bases, Strong reducing agents

SECTION 8. Exposure controls/personal protection

Control parameters

Occupational exposure limit values			
Chemical name	ACGIH TLV	OSHA PEL	NIOSH REL
tetrasodium pyrophosphate, decahydrate	-	-	TWA : 5 mg/m ³
copper dinitrate	TWA dust and mist: 1 mg/m ³	-	IDLH dust and mist: 100 mg/m ³ TWA dust and mist: 1 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	Safety glasses with side-shields.
Skin and body protection	Wear protective gloves/clothing.
Respiratory protection	In case of inadequate ventilation wear respiratory protection.
Hygiene measures	When using, do not eat, drink or smoke. 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 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	55401: cAMP-HRP Conjugate
Physical state	Liquid
Appearance	Clear
Color	Red
pH	7.4 (20 °C)
Kit Component	38720: cAMP Standard (2.4uM)
Physical state	Liquid
Appearance	Clear
Color	Colorless

Kit Component	7004: TMB Substrate
Physical state	Liquid
Appearance	Clear
Color	light yellow
pH	3.3 - 3.8 (20 °C)
Kit Component	7002: STOP Solution
Physical state	Liquid
Appearance	Clear
Color	Colorless
pH	1.2 (20 °C)
Kit Component	9801: ELISA Wash Buffer (20X)
Physical state	Liquid
Appearance	Clear
Color	Colorless
pH	6.4 (20 °C)
Kit Component	9803: Cell Lysis Buffer (10X)
Physical state	Liquid
Appearance	Clear
Color	Colorless
pH	7.5 (20 °C)
Kit Component	74746: cAMP Rabbit mAb Coated Microwells
Physical state	Solid
Appearance	Microwell Plate

SECTION 10. Stability and reactivity

Reactivity

No information available.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Hazardous reactions	None under normal processing.
Hazardous polymerization	None under normal processing.

Conditions to Avoid

Exposure to air or moisture over prolonged periods, Extremes of temperature and direct sunlight

Incompatible Materials

Strong oxidizing agents, Metals, Strong acids, Strong bases, Strong reducing agents

Hazardous Decomposition Products

Thermal decomposition can lead to release of irritating gases and vapors, Carbon oxides (COx)

SECTION 11. Toxicological information

Information on likely routes of exposure**Product 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
Inhalation

7002: STOP Solution

Avoid breathing vapors or mists May cause irritation of respiratory tract

Kit Component
Inhalation

9801: ELISA Wash Buffer (20X)

Avoid breathing vapors or mists May cause irritation of respiratory tract

Kit Component
Inhalation

55401: cAMP-HRP Conjugate

Avoid breathing vapors or mists May cause irritation of respiratory tract

Eye contact

Kit Component
Eye contact

55401: cAMP-HRP Conjugate

Avoid contact with eyes May cause slight irritation

Kit Component
Eye contact

7002: STOP Solution

May cause irreversible damage to eyes

Kit Component
Eye contact

9801: ELISA Wash Buffer (20X)

Avoid contact with eyes Expected to be an irritant based on components

Kit Component
Eye contact

9803: Cell Lysis Buffer (10X)

May cause temporary eye irritation Expected to be an irritant based on components

Skin contact

Kit Component
Skin contact

55401: cAMP-HRP Conjugate

Repeated or prolonged skin contact may cause allergic reactions with susceptible persons

Kit Component
Skin contact

7002: STOP Solution

Corrosive to skin Prolonged contact with skin is harmful

Kit Component
Skin contact

9801: ELISA Wash Buffer (20X)

Avoid contact with skin Expected to be an irritant based on components Repeated or prolonged skin contact may cause allergic reactions with susceptible persons

Ingestion

Kit Component
Ingestion

7002: STOP Solution

Harmful if swallowed Ingestion causes burns of the upper digestive and respiratory tract.

Kit Component
Ingestion

9801: ELISA Wash Buffer (20X)

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea

Information on toxicological effects**Component Information**

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
polyethylene glycol p-(1,1,3,3-tetramethylbutyl)phenylether	= 1800 mg/kg (Rat)	-	-
maleic acid	708 mg/kg (Rat)	1,560 mg/kg (Rabbit)	> 0.72 mg/L (Rat) 1h
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1)	= 53 mg/kg (Rat) = 481 mg/kg (Rat) 232 - 249 mg/kg (Rat) = 120 mg/kg (Rat)	= 200 mg/kg (Rabbit)	= 1.23 mg/L (Rat) 4 h = 0.11 mg/L (Rat) 4 h
copper dinitrate	794 mg/kg (Rat)	-	-

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

Symptoms

Significant esophageal or gastrointestinal tract irritation or burns may occur following ingestion. Respiratory tract irritation, if severe, can progress to pulmonary edema which may be delayed in onset up to 24 to 72 hours after exposure in some cases. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. 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.

Skin and Eye Corrosion/Irritation

Kit Component

Serious eye damage/eye irritation
Skin corrosion/irritation

7002: STOP Solution

Risk of serious damage to eyes
Causes burns

Kit Component

Serious eye damage/eye irritation
Skin corrosion/irritation

9801: ELISA Wash Buffer (20X)

Causes serious eye irritation
Irritating to skin

Kit Component

Serious eye damage/eye irritation

9803: Cell Lysis Buffer (10X)

Irritating to eyes

Sensitization

Kit Component

Skin Sensitization

55401: cAMP-HRP Conjugate

May cause skin sensitization

Kit Component

Skin Sensitization

9801: ELISA Wash Buffer (20X)

May cause skin sensitization

Kit Component

Skin Sensitization

7002: STOP Solution

May cause skin sensitization

Mutagenic effects

Kit Component

Mutagenic effects

7002: STOP Solution

Not mutagenic in AMES Test

Carcinogenicity

No component of this product present at levels greater than or equal to 0.1% is identifiable as probable, possible or confirmed carcinogen by IARC, ACGIH, NTP, or OSHA.

Reproductive toxicity

No information available.

Systemic Target Organ Toxicity (STOT)

Kit Component

STOT - repeated exposure
STOT - single exposure

7002: STOP Solution

May cause damage to organs through prolonged or repeated exposure
Respiratory system

Aspiration Hazard

No information available.

SECTION 12. Ecological information

Ecotoxicity**Product Information****Kit Component**

Ecotoxicity

9801: ELISA Wash Buffer (20X)

Harmful to aquatic life with long lasting effects

Component Information

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
polyethylene glycol p-(1,1,3,3-tetramethylbutyl)phenylether	-	LC50 8.9 mg/l (Pimephales promelas) 96 h	EC50 26 mg/l (Daphnia) 48 h
maleic acid	-	LC50 5 mg/L (Pimephales promelas) 96 h	EC50 250 - 400 mg/L (Daphnia magna) 48 h
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H-isothiazol-3-one [EC no. 220-239-6] (3:1)	EC50 0.11 - 0.16 mg/L (Pseudokirchneriella subcapitata) 72 h EC50 0.31 mg/L (Anabaena flos-aquae) 120 h EC50 0.03 - 0.13 mg/L (Pseudokirchneriella subcapitata) 96 h	LC50 1.6 mg/L (Oncorhynchus mykiss) 96 h	EC50 4.71 mg/L (Daphnia magna) 48 h EC50 0.71 - 0.99 mg/L (Daphnia magna) 48 h EC50 0.12 - 0.3 mg/L (Daphnia magna) 48 h
copper dinitrate	-	LC50 0.06 mg/L (Menidia menidia) 96 h LC50 0.015 mg/L (Pimephales promelas) 96 h	EC50 0.04 mg/L (Moina dubia) 48 h

Persistence and degradability**Kit Component**

Persistence and degradability

7002: STOP Solution

Product is biodegradable

Kit Component

Persistence and degradability

9801: ELISA Wash Buffer (20X)

Not readily biodegradable

Bioaccumulation**Kit Component**

Bioaccumulation

7002: STOP Solution

Not likely to bioaccumulate

Kit Component

Bioaccumulation

9801: ELISA Wash Buffer (20X)

Not likely to bioaccumulate

Chemical name	Octanol-Water Partition Coefficient
maleic acid	0.32

Mobility**Kit Component**

Mobility

7002: STOP Solution

Will likely be mobile in the environment due to its water solubility

Kit Component

Mobility

9801: ELISA Wash Buffer (20X)

Will likely be mobile in the environment due to its water solubility

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**DOT**

UN number	UN3265
UN proper shipping name	Corrosive liquid, acidic, organic, n.o.s. (maleic acid)
Transport hazard class(es)	8
Packing group	III

IATA

UN number	UN3265
UN proper shipping name	Corrosive liquid, acidic, organic, n.o.s. (maleic acid)
Transport hazard class(es)	8
Packing group	III

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

This product contains a chemical or chemicals included in the Toxic Substances Control Act (TSCA) Chemical Substance Inventory, Domestic Substances List (DSL) and/or Non-Domestic Substances List (NDSL):

Chemical name	TSCA 8(b)	TSCA 12(b)	DSL	NDSL
polyethylene glycol p-(1,1,3,3-tetramethylbutyl)phenylether	Listed	Not Listed	Listed	Not Listed
maleic acid	Listed	Not Listed	Listed	Not Listed
reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1)	Not Listed	Section 5: 1 %	Listed	Not Listed
copper dinitrate	Listed	Not Listed	Listed	Not Listed

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical name	CAS No	SARA 313 - Threshold Values %
trisodium tetraoxovanadate	13721-39-6	1.0
magnesium nitrate	10377-60-3	1.0
copper dinitrate	3251-23-8	1.0

SARA 311/312 Hazard Categories

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

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances	CWA - Bioaccumulative Chemicals of Concern (BCCs)
maleic acid	5000 lb	Not Listed	Not Listed	Listed	Not Listed
copper dinitrate	100 lb	Listed	Not Listed	Listed	Not Listed

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
maleic acid	5000 lb	Not Listed
copper dinitrate	100 lb	Not Listed

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product contains the following U.S. State Right to Know chemicals:

Chemical name	New Jersey	Massachusetts	Pennsylvania
maleic acid	Listed	Listed	Listed
disodium hydrogenorthophosphate	Listed	Listed	Listed
tetrasodium pyrophosphate, decahydrate	Listed	Listed	Listed
trisodium tetraoxovanadate	Listed	Not Listed	Not Listed
disodium hydrogenorthophosphate	Listed	Listed	Listed
magnesium nitrate	Listed	Listed	Listed
copper dinitrate	Listed	Listed	Listed

SECTION 16. Other information

Issuing Date: 2018-01-11

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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