

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

Issuing Date: 2018-02-08

Revision Date: 2024-04-26

Version: 2

SECTION 1. Identification

Product identifier

Product No 8020
Product name Cyclic GMP XP® Chemiluminescent Assay Kit
Kit Component 32140: cGMP Rabbit mAb Coated Microwells
 60309: cGMP-HRP Conjugate
 30440: cGMP Standard (5 uM)
 84850: Luminol/Enhancer Solution
 42552: Stable Peroxide Buffer
 9801: ELISA Wash Buffer (20X)
 9803: Cell Lysis Buffer (10X)

Hazardous Components

9803: Cell Lysis Buffer (10X)
 9801: ELISA Wash Buffer (20X)
 60309: cGMP-HRP Conjugate

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

This substance/mixture is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
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 skin irritation.

Causes serious eye damage.

May cause an allergic skin reaction.

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.

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

IF ON SKIN: Wash with plenty of soap and water

Take off contaminated clothing and wash before reuse

If skin irritation or rash 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.

Immediately call a POISON CENTER or doctor/physician.

Avoid release to the environment.

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

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

No information available.

SECTION 3. Composition/information on ingredients**Kit Component** 60309: cGMP-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 84850: Luminol/Enhancer Solution

Chemical name	CAS No	Weight-%
Ethylene glycol	107-21-1	3

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 irritation. Harmful to aquatic life with long lasting effects.

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

Kit Component 32140: cGMP Rabbit mAb Coated Microwells
30440: cGMP Standard (5 µM)
42552: Stable Peroxide Buffer

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 if symptoms occur.
Skin contact	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	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately if symptoms occur.
Ingestion	Clean mouth with water and afterwards drink plenty of water. Do not induce vomiting without medical advice. Get medical attention. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Contains an animal derived biological. May produce an allergic reaction in susceptible individuals. 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. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing. 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 of susceptible persons. Treat symptomatically.

Advice for emergency responders

General advice	For further assistance, contact your local Poison Control Center.
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 Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. Product is or contains a sensitizer.

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 Ensure adequate ventilation. Use personal protective equipment. Avoid contact with the skin and the eyes. 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. Local authorities should be advised if significant spillages cannot be contained. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. Prevent entry into waterways, sewers, basements or confined areas. Do not allow material to contaminate ground water 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. Wear personal protective equipment. When using, do not eat, drink or smoke.

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 Strong oxidizing agents, Strong acids, Strong bases

SECTION 8. Exposure controls/personal protection

Control parameters

Occupational exposure limit values			
Chemical name	ACGIH TLV	OSHA PEL	NIOSH REL
Ethylene glycol	Ceiling: 100 mg/m ³	-	-
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	Handle in accordance with good industrial hygiene and safety practice.

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	60309: cGMP-HRP Conjugate
Physical state	Liquid
Appearance	Clear
Color	Red
pH	7.4 (20 °C)
Kit Component	30440: cGMP Standard (5 uM)
Physical state	Liquid
Appearance	Clear
Color	Colorless
Kit Component	84850: Luminol/Enhancer Solution
Physical state	Liquid
Appearance	Clear
Color	Colorless / Light pink
pH	9.5 (20 °C)
Solubility	Soluble in water
Kit Component	42552: Stable Peroxide Buffer
Physical state	Liquid
Appearance	Clear
Color	Colorless
pH	4.9 - 5.1 (20 °C)
Solubility	Soluble in water
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
Color Colorless
pH 7.5 (20 °C)

Kit Component **32140: cGMP 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

No information available

Incompatible Materials

Strong oxidizing agents, Strong acids, Strong bases

Hazardous Decomposition Products

Nitrogen oxides (NO_x), Carbon oxides (CO_x)

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 **84850: Luminol/Enhancer Solution**
Inhalation Avoid breathing vapors or mists May cause irritation of respiratory tract

Kit Component **42552: Stable Peroxide Buffer**
Inhalation Avoid breathing vapors or mists May cause irritation of respiratory tract

Kit Component **9801: ELISA Wash Buffer (20X)**

Inhalation Avoid breathing vapors or mists May cause irritation of respiratory tract

Kit Component
Inhalation **60309: cGMP-HRP Conjugate**
Avoid breathing vapors or mists May cause irritation of respiratory tract

Eye contact

Kit Component
Eye contact **84850: Luminol/Enhancer Solution**
Avoid contact with eyes May cause slight irritation

Kit Component
Eye contact **42552: Stable Peroxide Buffer**
Avoid contact with eyes May cause slight irritation

Kit Component
Eye contact **9801: ELISA Wash Buffer (20X)**
Expected to be an irritant based on components

Kit Component
Eye contact **9803: Cell Lysis Buffer (10X)**
May cause temporary eye irritation

Skin contact

Kit Component
Skin contact **60309: cGMP-HRP Conjugate**
Repeated or prolonged skin contact may cause allergic reactions with susceptible persons

Kit Component
Skin contact **84850: Luminol/Enhancer Solution**
Avoid contact with skin

Kit Component
Skin contact **42552: Stable Peroxide Buffer**
Substance may cause slight skin irritation

Kit Component
Skin contact **9801: ELISA Wash Buffer (20X)**
Repeated or prolonged skin contact may cause allergic reactions with susceptible persons

Ingestion

Kit Component
Ingestion **84850: Luminol/Enhancer Solution**
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea

Kit Component
Ingestion **42552: Stable Peroxide Buffer**
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea

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)	-	-
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 Contains an animal derived biological. May produce an allergic reaction in susceptible individuals. 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. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing. 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 **9801: ELISA Wash Buffer (20X)**
 Serious eye damage/eye irritation Causes serious eye irritation

Kit Component **9803: Cell Lysis Buffer (10X)**
 Serious eye damage/eye irritation Irritating to eyes

Sensitization

Kit Component **60309: cGMP-HRP Conjugate**
 Skin Sensitization May cause skin sensitization

Kit Component **9801: ELISA Wash Buffer (20X)**
 Skin Sensitization May cause skin sensitization

Mutagenic effects No information available

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) No information available

Aspiration Hazard No information available.

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

Kit Component **9801: ELISA Wash Buffer (20X)**
 Ecotoxicity Harmful to aquatic life with long lasting effects

Component Information No information available

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
Ethylene glycol	EC50 6500 - 13000 mg/L (Pseudokirchneriella subcapitata) 96 h	LC50 40761 mg/L (Oncorhynchus mykiss) 96 h LC50 27540 mg/L (Lepomis macrochirus) 96 h LC50 41000 mg/L (Oncorhynchus mykiss)	EC50 46300 mg/L (Daphnia magna) 48 h

		96 h LC50 14 - 18 mL/L (Oncorhynchus mykiss) 96 h LC50 40000 - 60000 mg/L (Pimephales promelas) 96 h LC50 16000 mg/L (Poecilia reticulata) 96 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	9801: ELISA Wash Buffer (20X)
Persistence and degradability	Not readily biodegradable

Bioaccumulation

Kit Component	9801: ELISA Wash Buffer (20X)
Bioaccumulation	Not likely to bioaccumulate

Chemical name	Octanol-Water Partition Coefficient
Ethylene glycol	-1.93

Mobility

Kit Component	9801: ELISA Wash Buffer (20X)
Mobility	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

This material is not subject to regulation as a hazardous material for shipping.

SECTION 15. Regulatory information

North American Inventory Listing

Refer to kit component SDS for full Toxic Substance Control Act (TSCA) reporting requirements.

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
Ethylene glycol	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

Refer to kit component SDS for full SARA Section 313 reporting requirements.

Chemical name	CAS No	SARA 313 - Threshold Values %
Ethylene glycol	107-21-1	1.0
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	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

Refer to kit component SDS for full Clean Water Act (CWA) reporting requirements.

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

CERCLA

Refer to kit component SDS for full Comprehensive Environmental Response Compensation and Liability Act (CERCLA) reporting requirements.

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
Ethylene glycol	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

Refer to kit component SDS for applicable State Right-To-Know (RTK) information.

Chemical name	New Jersey	Massachusetts	Pennsylvania
Ethylene glycol	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:** 2018-02-08**Revision Date:** 2024-04-26**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