



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

**Issuing Date:** 2018-01-11

**Revision Date:** 2024-04-26

**Version:** 2

## SECTION 1. Identification

### Product identifier

**Product No** 4360  
**Product name** Cyclic GMP XP® Assay Kit  
**Kit Component**  
10551: cGMP Rabbit mAb Coated Microwells  
51283: cGMP-HRP Conjugate  
30440: cGMP Standard (5 uM)  
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)  
51283: cGMP-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.

<b>Skin corrosion/irritation</b>	Category 1
<b>Serious eye damage/eye irritation</b>	Category 1

<b>Skin sensitization</b>	Category 1
<b>Chronic aquatic toxicity</b>	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** 51283: 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** 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 10551: cGMP Rabbit mAb Coated Microwells**  
**30440: cGMP Standard (5 uM)**  
**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

<b>Eye contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.
<b>Skin contact</b>	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.
<b>Inhalation</b>	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.
<b>Ingestion</b>	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 (CO<sub>2</sub>)  
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

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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

<b>Technical measures/Storage conditions</b>	Keep containers tightly closed in a cool, well-ventilated place. Protect from light.
<b>Packaging material</b>	No information available.
<b>Incompatible products</b>	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 <sup>3</sup>
copper dinitrate	TWA dust and mist: 1 mg/m <sup>3</sup>	-	IDLH dust and mist: 100 mg/m <sup>3</sup> TWA dust and mist: 1 mg/m <sup>3</sup>

#### 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.

<b>Eye/face protection</b>	Safety glasses with side-shields.
<b>Skin and body protection</b>	Wear protective gloves/clothing.
<b>Respiratory protection</b>	In case of inadequate ventilation wear respiratory protection.
<b>Hygiene measures</b>	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

<b>Kit Component</b>	<b>51283: cGMP-HRP Conjugate</b>
Physical state	Liquid
Appearance	Clear
Color	Red
pH	7.4 (20 °C)
<b>Kit Component</b>	<b>30440: cGMP Standard (5 uM)</b>
Physical state	Liquid
Appearance	Clear
Color	Colorless

<b>Kit Component</b>	<b>7004: TMB Substrate</b>
Physical state	Liquid
Appearance	Clear
Color	light yellow
pH	3.3 - 3.8 (20 °C)
<b>Kit Component</b>	<b>7002: STOP Solution</b>
Physical state	Liquid
Appearance	Clear
Color	Colorless
pH	1.2 (20 °C)
<b>Kit Component</b>	<b>9801: ELISA Wash Buffer (20X)</b>
Physical state	Liquid
Appearance	Clear
Color	Colorless
pH	6.4 (20 °C)
<b>Kit Component</b>	<b>9803: Cell Lysis Buffer (10X)</b>
Physical state	Liquid
Appearance	Clear
Color	Colorless
pH	7.5 (20 °C)
<b>Kit Component</b>	<b>10551: cGMP Rabbit mAb Coated Microwells</b>
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

<b>Hazardous reactions</b>	None under normal processing.
<b>Hazardous polymerization</b>	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

**51283: cGMP-HRP Conjugate**  
Avoid breathing vapors or mists May cause irritation of respiratory tract

**Eye contact**

**Kit Component**  
Eye contact

**51283: cGMP-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

**51283: cGMP-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**

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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

###### **51283: cGMP-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**

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

**IATA**

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

<b>Chemical name</b>	<b>TSCA 8(b)</b>	<b>TSCA 12(b)</b>	<b>DSL</b>	<b>NDSL</b>
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

**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