



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

Issuing Date: 2018-07-16

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Version: 4

SECTION 1. Identification

Product identifier

Product No 23595
Product name PathScan® RP Total Rb Sandwich ELISA Kit
Kit Component
73419: Rb Mouse mAb Coated Microwells
96826: Rb Rabbit Detection mAb
9801: ELISA Wash Buffer (20X)
9803: Cell Lysis Buffer (10X)
7004: TMB Substrate
7002: STOP Solution

Hazardous Components

13515: HRP Diluent
7002: STOP Solution
9801: ELISA Wash Buffer (20X)
9803: Cell Lysis Buffer (10X)

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.

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.

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**

13515: HRP Diluent

WARNING: May cause an allergic skin reaction.

Chemical name	CAS No.	Weight-%
reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H -isothiazol-3-one	55965-84-9	0.005-0.025

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 and 2-methyl-2H -isothiazol-3-one	55965-84-9	0.005-0.025

Kit Component 9803: Cell Lysis Buffer (10X)

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

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 73419: Rb Mouse mAb Coated Microwells
96826: Rb Rabbit Detection mAb
7004: TMB Substrate

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	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
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. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.
Ingestion	Get medical attention. Clean mouth with water and afterwards drink plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Contains kit components which may cause the following effects, refer to individual component SDSs for full information on symptoms. 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. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. 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.

Indication of any immediate medical attention and special treatment needed

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 Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Carbon dioxide (CO₂). Foam. Water spray. Dry powder.

Specific hazards arising from the chemical

The product causes burns 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 Avoid contact with skin, eyes and clothing. Use personal protective equipment. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
Other information Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Do not allow material to contaminate ground water system. Should not be released into the environment. Prevent product from entering drains. Cover discharges with foam in order to reduce the risks of ignition. Prevent further leakage or spillage if safe to do so.

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. Clean contaminated surface thoroughly. Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

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. Wear personal protective equipment. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation at machinery.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions	Keep away from direct sunlight. Keep containers tightly closed in a dry, cool and well-ventilated place.
Packaging material	No information available
Incompatible products	Metals, Strong oxidizing agents, strong acids, and strong bases

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

Appropriate engineering controls

Showers, eyewash stations, and ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection	Tightly fitting safety goggles.
Skin and body protection	Lightweight protective clothing. Impervious gloves.
Respiratory protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Use a self contained positive pressure individual breathing apparatus if vapour inhalation is a risk. No special protective equipment required.
Hygiene measures	Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Provide regular cleaning of equipment, work area and clothing. Keep away from food, drink and animal feeding stuffs. Wear suitable gloves and eye/face protection.

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	73419: Rb Mouse mAb Coated Microwells
Appearance	Microwell Plate
Kit Component	96826: Rb Rabbit Detection mAb
Physical state	Solid
Appearance	Powder, Lyophilized
Color	Red
Kit Component	13515: HRP Diluent
Physical state	Liquid
Appearance	Clear
Color	Red
pH	7.4 (20 °C)
Kit Component	7002: STOP Solution
Physical state	Liquid
Appearance	Clear
Color	Colorless

pH 1.2 (20 °C)

Kit Component 7004: TMB Substrate

Physical state Liquid
Appearance Clear
Color Light yellow
pH 3.3-3.8 (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)

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

Extremes of temperature and direct sunlight. Exposure to air or moisture over prolonged periods. Over a period of time, sodium azide may react with copper, lead, brass, or solder in plumbing systems to form an accumulation of the HIGHLY EXPLOSIVE compounds of lead azide & copper azide.

Incompatible materials

Metals, Strong oxidizing agents, strong acids, and strong bases

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 Inhalation	96826: Rb Rabbit Detection mAb May cause allergic respiratory reaction.
Kit Component Inhalation	13515: HRP Diluent Avoid breathing vapors or mists. May cause irritation of respiratory tract.
Kit Component Inhalation	7002: STOP Solution Aerosol expected to be irritating based on components.
Kit Component Inhalation	9801: ELISA Wash Buffer (20X) Avoid breathing vapors or mists. May cause irritation of respiratory tract.

Eye contact

Kit Component Eye contact	13515: HRP Diluent Contact with eyes may cause irritation.
Kit Component Eye contact	7002: STOP Solution May cause irreversible damage to eyes.
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) Expected to be an irritant based on components.

Skin contact

Kit Component Skin contact	96826: Rb Rabbit Detection mAb Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
Kit Component Skin contact	13515: HRP Diluent 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) Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Expected to be an irritant based on components.

Ingestion

Kit Component Ingestion	7002: STOP Solution Ingestion causes burns of the upper digestive and respiratory tract. Harmful if swallowed.
Kit Component Ingestion	9801: ELISA Wash Buffer (20X) Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms related to the physical, chemical and toxicological characteristics**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
polyethylene glycol p-(1,1,3,3-tetramethylbutyl)phenylether	= 1700 mg/kg (Rat) = 1800 mg/kg (Rat)	-	-
maleic acid	708 mg/kg (Rat)	1,560 mg/kg (Rabbit)	> 0.72 mg/L (Rat) 1h
tetrasodium pyrophosphate, decahydrate	1000 - 3000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	-
reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazol-3-one	= 481 mg/kg (Rat) 232 - 249 mg/kg (Rat) = 120 mg/kg (Rat) = 53 mg/kg (Rat)	= 200 mg/kg (Rabbit) = 87.12 mg/kg (Rabbit)	= 1.23 mg/L (Rat) 4 h = 0.11 mg/L (Rat) 4 h

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

Contains kit components which may cause the following effects, refer to individual component SDSs for full information on symptoms. 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. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. 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.

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
Causes skin irritation

Kit Component

Serious eye damage/eye irritation

9803: Cell Lysis Buffer (10X)

Irritating to eyes

Sensitization**Kit Component**

Respiratory Sensitization
Skin Sensitization

Green Detection Antibody (Lyophilized) 96826: Rb Rabbit Detection mAb

May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause skin sensitization

Kit Component

Skin Sensitization

7002: STOP Solution

May cause skin sensitization

Kit Component

Skin Sensitization

13515: HRP Diluent

Product is or contains a sensitizer. May cause an allergic skin reaction

Kit Component
Skin Sensitization

9801: ELISA Wash Buffer (20X)
Product is or contains a sensitizer. May cause an allergic skin reaction

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 Ecotoxicity

Kit Component
Ecotoxicity

7002: STOP Solution
Toxic to aquatic life

Kit Component
Ecotoxicity

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

Component Information

Chemical name	Algae/aquatic plants	Fish	Crustacea
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: =5mg/L (96h, Pimephales promelas)	EC50: 250 - 400mg/L (48h, Daphnia magna)
reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazol-3-one	EC50: 0.11 - 0.16mg/L (72h, Pseudokirchneriella subcapitata) EC50: 0.03 - 0.13mg/L (96h, Pseudokirchneriella subcapitata)	LC50: =1.6mg/L (96h, Oncorhynchus mykiss)	EC50: =4.71mg/L (48h, Daphnia magna) EC50: 0.12 - 0.3mg/L (48h, Daphnia magna) EC50: 0.71 - 0.99mg/L (48h, Daphnia magna)

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 **7002: STOP Solution**
Bioaccumulation Not likely to bioaccumulate

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

Chemical name	Partition coefficient
maleic acid	-0.34
reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazol-3-one	0.75

Mobility

Kit Component **7002: STOP Solution**
Mobility Will likely be mobile in the environment due to its water solubility

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**

Should not be released into the environment.

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 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 or ID 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

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 and 2-methyl-2H-isothiazol-3-one	Not Listed	Section 5(a)(2): 1 %	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 %
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	Yes
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)
maleic acid	5000 lb	Not 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
maleic acid	5000 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
water	Not Listed	Not Listed	Listed
maleic acid	Listed	Listed	Listed

disodium hydrogenorthophosphate	Listed	Listed	Listed
tetrasodium pyrophosphate, decahydrate	Listed	Listed	Listed
trisodium tetraoxovanadate	Listed	Not Listed	Not Listed
FD&C Blue 1	Not Listed	Listed	Not Listed
Magnesium nitrate	Listed	Listed	Listed
copper dinitrate	Listed	Listed	Listed

SECTION 16. Other information**Issuing Date:** 2018-07-16**Revision Date:** 2025-08-25**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