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

Issuing Date: 2018-01-19 **Revision Date:** 2024-01-23 **Version:** 3

SECTION 1. Identification

Product identifier

Product No 14520

Product name PathScan® RP Total B7-H4 Sandwich ELISA Kit

Kit Component
26894: B7-H4 Rabbit mAb Coated Microwells
66040: B7-H4 Rabbit Detection mAb
13515: HRP Diluent
7002: STOP Solution
7004: TMB Substrate
9801: ELISA Wash Buffer (20X)
9803: Cell Lysis Buffer (10X)

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

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.

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

Supplementary Hazard Information

Hazards not otherwise classified (HNOC)
Harmful to aquatic life with long lasting effects.

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

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 **26894: B7-H4 Rabbit mAb Coated Microwells**
66040: B7-H4 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 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
Carbon dioxide (CO_2)
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. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

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

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	Lightweight protective clothing. Impervious gloves.
Respiratory protection	In case of inadequate ventilation wear respiratory protection.
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	**26894: B7-H4 Rabbit mAb Coated Microwells**
Physical state	Solid
Appearance	Microwell Plate
Kit Component	**66040: B7-H4 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	**66040: B7-H4 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	**66040: B7-H4 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	**9801: ELISA Wash Buffer (20X)**

Ingestion	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

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	**7002: STOP Solution**
Serious eye damage/eye irritation	Risk of serious damage to eyes
Skin corrosion/irritation	Causes burns
Kit Component	**9801: ELISA Wash Buffer (20X)**
Serious eye damage/eye irritation	Causes serious eye irritation
Skin corrosion/irritation	Causes skin irritation
Kit Component	**9803: Cell Lysis Buffer (10X)**
Serious eye damage/eye irritation	Irritating to eyes

Sensitization

Kit Component	**66040: B7-H4 Rabbit Detection mAb**
Respiratory Sensitization	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sensitization	May cause skin sensitization
Kit Component	**7002: STOP Solution**
Skin Sensitization	May cause skin sensitization
Kit Component	**13515: HRP Diluent**
Skin Sensitization	Product is or contains a sensitizer. May cause an allergic skin reaction
Kit Component	**9801: ELISA Wash Buffer (20X)**
Skin Sensitization	Product is or contains a sensitizer. May cause an allergic skin reaction

Mutagenic effects

Kit Component	**7002: STOP Solution**
Mutagenic effects	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	**7002: STOP Solution**
STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure
STOT - single exposure	Respiratory system

Aspiration Hazard No information available.

SECTION 12. Ecological information

Ecotoxicity

Product Information
Ecotoxicity

Kit Component	**7002: STOP Solution**
Ecotoxicity	Toxic to aquatic life

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

Persistence and degradability

Kit Component	**7002: STOP Solution**
Persistence and degradability	Product is biodegradable

Kit Component	**9801: ELISA Wash Buffer (20X)**
Persistence and degradability	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	Octanol-Water Partition Coefficient
maleic acid	0.32

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 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	Listed	Not Listed	Listed	Not Listed

p-(1,1,3,3-tetramethylbutyl)phenylether				
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

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
maleic acid	Listed	Listed	Listed
disodium hydrogenorthophosphate	Listed	Listed	Listed
tetrasodium pyrophosphate, decahydrate	Listed	Listed	Listed
trisodium tetraoxovanadate	Listed	Not Listed	Not Listed
magnesium nitrate	Listed	Listed	Listed
copper dinitrate	Listed	Listed	Listed

SECTION 16. Other information

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Revision Date: 2024-01-23

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