

**Safety Data Sheet (SDS)** According to the REACH Regulation (EC) No. 1907/2006

**Issuing Date:** 2018-05-24

**Revision Date:** 2024-03-04

**Version:** 2

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

<b>Product No</b>	12692
<b>Product name</b>	SignalStain® Apoptosis (Cleaved Caspase-3) IHC Detection Kit
<b>Kit Component</b>	9579: Cleaved Caspase-3 (Asp175) (D3E9) Rabbit mAb 12960: Rabbit (DA1E) mAb IgG XP® SignalStain® Isotype Control 9997: Tris Buffered Saline with Tween® 20 (TBST-10X) 8114: SignalStain® Boost IHC Detection Reagent (HRP, Rabbit) 11724: SignalStain® DAB Diluent 11725: SignalStain® DAB Chromogen Concentrate 8112: SignalStain® Antibody Diluent 5425: Normal Goat Serum

### Contains

<b>Chemical name</b>	<b>Index No.</b>	<b>CAS No</b>
glycerol (>100%)	Not Listed	56-81-5
acetonitrile (50 - 60%)	608-001-00-3	75-05-8
3,3-Diaminobenzidine tetrahydrochloride hydrate (0 - 10%)	-	868272-85-9
trometamol (0 - 10%)	Not Listed	77-86-1
1-Imidazole (0.1-0.5)	-	288-32-4
sodium azide (0 - 10%)	011-004-00-7	26628-22-8
2-methyl-2H-isothiazol-3-one (0 - 10%)	Not Listed	2682-20-4
5-chloro-2-methyl-2H-isothiazol-3-one (0 - 10%)	613-167-00-5	26172-55-4

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** For Research Use Only. Not for Use in Diagnostic Procedures.

### 1.3. Details of the supplier of the safety data sheet

<b>Importer</b>	<b>Manufacturer</b>
Cell Signaling Technology Europe B.V. Dellaertweg 9b 2316 WZ Leiden The Netherlands TEL: +31 (0)71 7200 200 FAX: +31 (0)71 891 0019	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](http://www.cellsignal.com)  
**E-mail Address** [info@cellsignal.eu](mailto:info@cellsignal.eu)

**1.4. Emergency telephone number**

**CHEMTREC** 24 hours a day, 7 days a week, 365 days a year  
+1 703 527 3887 (INTERNATIONAL) +1 800 424 9300 (NORTH AMERICA)

Europe 112

**SECTION 2: Hazards identification**

**2.1. Classification of the substance or mixture**

Regulation (EC) No. 1272/2008

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.

Acute oral toxicity	Category 4 - (H302)
Acute inhalation toxicity	Category 4 - (H332)
Serious eye damage/eye irritation	Category 2 - (H319)
Skin sensitization	Category 1 - (H317)
Germ cell mutagenicity	Category 2 - (H341)
Carcinogenicity	Category 1B - (H350)
Reproductive toxicity	Category 1B - (H360)
Flammable liquids	Category 2 - (H225)

**2.2. Label elements**



**Signal word**

Danger

**Hazard statement(s)**

- H225 - Highly flammable liquid and vapor.
- H302 - Harmful if swallowed.
- H317 - May cause an allergic skin reaction.
- H319 - Causes serious eye irritation.
- H332 - Harmful if inhaled.
- H341 - Suspected of causing genetic defects.
- H350 - May cause cancer.
- H360 - May damage fertility or the unborn child.

**Precautionary statement(s)**

- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P233 - Keep container tightly closed.
- P240 - Ground/Bond container and receiving equipment.
- P241 - Use explosion-proof electrical/ ventilating/ lighting/ equipment.
- P242 - Use only non-sparking tools.

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P243 - Take precautionary measures against static discharge.  
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.  
P264 - Wash face, hands and any exposed skin thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P271 - Use only outdoors or in a well-ventilated area.  
P272 - Contaminated work clothing should not be allowed out of the workplace.  
P280 - Wear protective gloves/protective clothing and eye/face protection.  
P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.  
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308 + P313 - IF exposed or concerned: Get medical advice/attention.  
P312 - Call a POISON CENTER or doctor if you feel unwell.  
P330 - Rinse mouth.  
P337 + P313 - If eye irritation persists: Get medical advice/attention.  
P362 - Take off contaminated clothing and wash before reuse.  
P405 - Store locked up.  
P501 - Dispose of contents/container to an approved waste disposal plant.

### 2.3. Other hazards

For the full text of the H-phrases & EUH-phrases mentioned in this Section, see Section 16

## SECTION 3. Composition/information on ingredients

### Kit Component 11724: SignalStain® DAB Diluent

DANGER: May damage fertility or the unborn child.

Chemical name	CAS No	Weight-%	EC No	Classification (1272/2008)	REACH Registration Number
1-Imidazole	288-32-4	0.1-0.5	206-019-2	Acute Tox. 4 (H302) Skin Corr. 1C (H314) Repr. 1B (H360D)	no data available

### Kit Component 11725: SignalStain® DAB Chromogen Concentrate

DANGER: Highly flammable liquid and vapor. Harmful if swallowed. Harmful if inhaled. Causes serious eye irritation. Suspected of causing genetic defects. May cause cancer.

Chemical name	CAS No	Weight-%	EC No	Classification (1272/2008)	REACH Registration Number
acetonitrile	75-05-8	50	200-835-2	Acute Tox. 4 (H302) Acute Tox. 4 (H312) Acute Tox. 4 (H332) Eye Irrit. 2 (H319) Flam. Liq. 2 (H225)	no data available
3,3-Diaminobenzidine tetrahydrochloride hydrate	868272-85-9	2.5	-	Muta. 2 (H341) Carc. 1B (H350)	no data available

### Kit Component 9997: Tris Buffered Saline with Tween® 20 (TBST-10X)

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Chemical name	CAS No	Weight-%	EC No	Classification (1272/2008)	REACH Registration Number
trometamol	77-86-1	<2	201-064-4	-	no data available

**Kit Component****8114: SignalStain® Boost IHC Detection Reagent (HRP, Rabbit)**

WARNING: May cause an allergic skin reaction.

Chemical name	CAS No	Weight-%	EC No	Classification (1272/2008)	REACH Registration Number
2-methyl-2H-isothiazol-3-one	2682-20-4	<0.01	220-239-6	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 2 (H330) Skin Corr. 1B (H314) Skin Sens. 1 (H317) Eye Dam. 1 (H318) Aquatic Chronic 1 (H410) Aquatic Acute 1 (H400)	no data available
5-chloro-2-methyl-2H-isothiazol-3-one	26172-55-4	<0.01	247-500-7	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Skin Corr. 1B (H314) Skin Sens. 1 (H317) Eye Dam. 1 (H318) STOT SE 3 (H335) Aquatic Acute 1 (H400)	no data available

**Kit Component****9579: Cleaved Caspase-3 (Asp175) (D3E9) Rabbit mAb**

Chemical name	CAS No	Weight-%	EC No	Classification (1272/2008)	REACH Registration Number
glycerol	56-81-5	30-60	200-289-5	-	no data available
sodium azide	26628-22-8	<0.02	247-852-1	Acute Tox. 2 (H300) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) (EUH032)	no data available

**Kit Component****8112: SignalStain® Antibody Diluent**

Chemical name	CAS No	Weight-%	EC No	Classification (1272/2008)	REACH Registration Number
sodium azide	26628-22-8	<0.1	247-852-1	Acute Tox. 2 (H300) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) (EUH032)	no data available

**Kit Component****5425: Normal Goat Serum**

Chemical name	CAS No	Weight-%	EC No	Classification (1272/2008)	REACH Registration
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					Number
goat serum	-	>99	-	-	no data available
Sodium o-(ethylmercurithio)benzo ate	54-64-8	<0.1	200-210-4	Acute Tox. 2 (H300) Acute Tox. 1 (H310) Acute Tox. 2 (H330) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	no data available

### Kit Component 12960: Rabbit (DA1E) mAb IgG XP® SignalStain® Isotype Control

Chemical name	CAS No	Weight-%	EC No	Classification (1272/2008)	REACH Registration Number
glycerol	56-81-5	30-60	200-289-5	-	no data available
sodium azide	26628-22-8	<0.02	247-852-1	Acute Tox. 2 (H300) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) (EUH032)	no data available

For the full text of the H-phrases & EUH-phrases mentioned in this Section, see Section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

<b>General advice</b>	Use first aid treatment according to the nature of the injury. When symptoms persist or in all cases of doubt seek medical advice.
<b>Inhalation</b>	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. If symptoms persist, call a physician.
<b>Skin contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. If skin irritation persists, call a physician.
<b>Eye contact</b>	Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing. Get medical attention immediately if irritation persists.
<b>Ingestion</b>	Clean mouth with water and afterwards drink plenty of water. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. If symptoms persist, call a physician.

### 4.2. Most important symptoms and effects, both acute and delayed

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. 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.

### 4.3. Indication of any immediate medical attention and special treatment needed

<b>Notes to physician</b>	Treat symptomatically.
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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment
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Carbon dioxide (CO<sub>2</sub>)  
Water spray  
Dry chemical  
Alcohol-resistant foam

**Unsuitable Extinguishing Media** Do not use a solid water stream as it may scatter and spread fire

**5.2. Special hazards arising from the substance or mixture**

Thermal decomposition can lead to release of toxic and corrosive gases/vapors.

**5.3. Advice for firefighters**

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment.

**SECTION 6: Accidental release measures**

**6.1. Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel** Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Remove all sources of ignition. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Take precautionary measures against static discharges.

**For emergency responders** Use personal protection recommended in Section 8.

**6.2. Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

**6.3. 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** Contain the spill. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

**6.4. Reference to other sections**

See Sections 8 & 13 for additional information.

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

Handle in accordance with good industrial hygiene and safety practice. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Ensure adequate ventilation. Keep away from open flames, hot surfaces and sources of ignition. Do not breathe vapors or spray mist. Do not eat, drink or smoke when using this product.

**7.2. Conditions for safe storage, including any incompatibilities**

Keep container tightly closed in a dry and well-ventilated place.

**7.3. Specific end use(s)**

Use as a laboratory reagent.

## SECTION 8: Exposure controls/personal protection

## 8.1. Control parameters

Chemical name	European Union	United Kingdom	France	Spain	Germany
glycerol		STEL 30 mg/m <sup>3</sup> TWA 10 mg/m <sup>3</sup>	TWA 10 mg/m <sup>3</sup>	TWA 10 mg/m <sup>3</sup>	Ceiling / Peak: 400 mg/m <sup>3</sup> TWA: 200 mg/m <sup>3</sup>
acetonitrile	TWA 40 ppm TWA 70 mg/m <sup>3</sup> S*	STEL 60 ppm STEL 102 mg/m <sup>3</sup> STEL 15 mg/m <sup>3</sup> TWA 40 ppm TWA 68 mg/m <sup>3</sup> 5 mg/m <sup>3</sup> Skin	TWA 40 ppm TWA 70 mg/m <sup>3</sup> 5 mg/m <sup>3</sup> P*	TWA 40 ppm TWA 68 mg/m <sup>3</sup> S*	TWA: 10 ppm TWA: 17 mg/m <sup>3</sup> Skin Ceiling / Peak: 20 ppm Ceiling / Peak: 34 mg/m <sup>3</sup> Ceiling / Peak: 2 mg/m <sup>3</sup> TWA: 2 mg/m <sup>3</sup> H*
3,3-Diaminobenzidine tetrahydrochloride hydrate					Skin K2
sodium azide	TWA 0.1 mg/m <sup>3</sup> STEL 0.3 mg/m <sup>3</sup> S*	STEL 0.3 mg/m <sup>3</sup> TWA 0.1 mg/m <sup>3</sup> Skin	TWA 0.1 mg/m <sup>3</sup> STEL 0.3 mg/m <sup>3</sup> P*	TWA 0.1 mg/m <sup>3</sup> STEL 0.3 mg/m <sup>3</sup> S*	TWA: 0.2 mg/m <sup>3</sup> Ceiling / Peak: 0.4 mg/m <sup>3</sup>
2-methyl-2H-isothiazol-3-one					Ceiling / Peak: 0.4 mg/m <sup>3</sup> TWA: 0.2 mg/m <sup>3</sup>
5-chloro-2-methyl-2H-isothiazol-3-one					Ceiling / Peak: 0.4 mg/m <sup>3</sup> TWA: 0.2 mg/m <sup>3</sup>
Chemical name	Italy	Portugal	Netherlands	Finland	Denmark
glycerol		TWA 10 mg/m <sup>3</sup>		TWA 20 mg/m <sup>3</sup>	
acetonitrile	TWA 20 ppm TWA 35 mg/m <sup>3</sup> Pelle*	TWA 40 ppm TWA 70 mg/m <sup>3</sup> C(A4) P*	Huid* STEL 5 mg/m <sup>3</sup> TWA 34 mg/m <sup>3</sup> 1 mg/m <sup>3</sup>	TWA 20 ppm TWA 34 mg/m <sup>3</sup> 1 mg/m <sup>3</sup> STEL 40 ppm STEL 68 mg/m <sup>3</sup> 5 mg/m <sup>3</sup> iho*	TWA 40 ppm TWA 70 mg/m <sup>3</sup> H*
sodium azide	TWA 0.1 mg/m <sup>3</sup> STEL 0.3 mg/m <sup>3</sup> Pelle*	TWA 0.1 mg/m <sup>3</sup> STEL 0.3 mg/m <sup>3</sup> Ceiling 0.29 mg/m <sup>3</sup> Ceiling 0.11 ppm C(A4) P*	Huid* STEL 0.3 mg/m <sup>3</sup> TWA 0.1 mg/m <sup>3</sup>	TWA 0.1 mg/m <sup>3</sup> STEL 0.3 mg/m <sup>3</sup> iho*	TWA 0.1 mg/m <sup>3</sup> H*
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
glycerol		SS-C** TWA 50 mg/m <sup>3</sup> STEL 100 mg/m <sup>3</sup>	TWA 10 mg/m <sup>3</sup>		TWA 10 mg/m <sup>3</sup> STEL 30 mg/m <sup>3</sup>
acetonitrile	H* STEL 160 ppm STEL 280 mg/m <sup>3</sup> TWA 40 ppm TWA 70 mg/m <sup>3</sup>	SS-C** H* TWA 20 ppm TWA 34 mg/m <sup>3</sup> STEL 40 ppm STEL 68 mg/m <sup>3</sup>	TWA 70 mg/m <sup>3</sup> STEL 140 mg/m <sup>3</sup>	TWA 30 ppm TWA 50 mg/m <sup>3</sup> 5 mg/m <sup>3</sup> S* STEL 45 ppm STEL 75 mg/m <sup>3</sup> 10 mg/m <sup>3</sup>	TWA 40 ppm TWA 70 mg/m <sup>3</sup> 5 mg/m <sup>3</sup> STEL 120 ppm STEL 310 mg/m <sup>3</sup> STEL 15 mg/m <sup>3</sup> Skin
3,3-Diaminobenzidine tetrahydrochloride hydrate	H* A2 TWA 0.003 ppm TWA 0.03 mg/m <sup>3</sup>				
sodium azide	H* STEL 0.3 mg/m <sup>3</sup> TWA 0.1 mg/m <sup>3</sup>	TWA 0.2 mg/m <sup>3</sup> STEL 0.4 mg/m <sup>3</sup>	TWA 0.1 mg/m <sup>3</sup> STEL 0.3 mg/m <sup>3</sup>	TWA 0.1 mg/m <sup>3</sup> STEL 0.1 mg/m <sup>3</sup>	TWA 0.1 mg/m <sup>3</sup> STEL 0.3 mg/m <sup>3</sup> Skin
2-methyl-2H-isothiazol-3-one	H*	S+			

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	TWA 0.05 mg/m <sup>3</sup> Sh/Sah**				
5-chloro-2-methyl-2H-isothiazol-3-one	H* TWA 0.05 mg/m <sup>3</sup> Sh/Sah**	S+			

### 8.2. Exposure controls

#### Appropriate engineering controls

Showers, eyewash stations, and ventilation systems.

#### Individual protection measures, such as personal protective equipment

##### Eye/face protection

Safety glasses with side-shields.

##### Skin protection

Wear protective gloves and protective clothing

##### Hand protection

Impervious gloves.

##### Other

Wear suitable protective clothing.

##### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

#### Environmental Exposure Controls

No information available.

## SECTION 9. Physical and chemical properties

### 9.1. Information on basic 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.

#### Kit Component

Physical state

Appearance

Color

pH

Remarks

#### 9579: Cleaved Caspase-3 (Asp175) (D3E9) Rabbit mAb

Liquid

Clear

Colorless

7.5

@ 20 °C

#### Kit Component

Physical state

Appearance

Color

pH

Remarks

#### 12960: Rabbit (DA1E) mAb IgG XP® SignalStain® Isotype Control

Liquid

Clear

Colorless

7.5

@ 20 °C

#### Kit Component

Physical state

Appearance

Color

pH

#### 9997: Tris Buffered Saline with Tween® 20 (TBST-10X)

Liquid

Clear

Colorless

7.4

#### Kit Component

Physical state

Appearance

Color

#### 8114: SignalStain® Boost IHC Detection Reagent (HRP, Rabbit)

Liquid

Clear

Orange

#### Kit Component

Physical state

#### 11725: SignalStain® DAB Chromogen Concentrate

Liquid



Color Brown / Purple  
Boiling point or initial boiling point and boiling range >82 °C  
Flash point <23°C/<73°F

**Kit Component** 11724: SignalStain® DAB Diluent  
Physical state Liquid  
Appearance Clear  
Color Colorless

**Kit Component** 8112: SignalStain® Antibody Diluent  
Physical state Liquid  
Appearance Clear  
Color Light yellow  
pH 7.4  
Remarks @ 20 °C

**Kit Component** 5425: Normal Goat Serum  
Physical state Liquid

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No information available.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

**Hazardous polymerization** Hazardous polymerization does not occur.  
**Hazardous reactions** None under normal processing

### 10.4. Conditions to avoid

Heat, flames and sparks  
Extremes of temperature and direct sunlight  
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.

### 10.5. Incompatible materials

Strong oxidizing agents, Strong acids, Lithium alkyls, Bromine compounds.

### 10.6. Hazardous decomposition products

Thermal decomposition can lead to release of irritating gases and vapors  
Nitrogen oxides (NO<sub>x</sub>)  
Carbon oxides (CO<sub>x</sub>)  
Hydrogen chloride  
Sodium oxides

## SECTION 11: Toxicological information

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## 12692 SignalStain® Apoptosis (Cleaved Caspase-3) IHC Detection Kit

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### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### 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.

#### Component Information

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
glycerol	= 12600 mg/kg (Rat)	> 10 g/kg (Rabbit)	> 570 mg/m <sup>3</sup> (Rat) 1 h
acetonitrile	= 2460 mg/kg (Rat) = 160 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	= 26.8 mg/L (Rat) 4 h = 7551 ppm (Rat) 8 h
trometamol	5900 mg/kg (Rat)	-	-
1-Imidazole	= 220 mg/kg (Rat)	-	-
sodium azide	= 27 mg/kg (Rat)	= 20 mg/kg (Rabbit) = 50 mg/kg (Rat)	-
2-methyl-2H-isothiazol-3-one	53 mg/kg (Rat)	-	-
5-chloro-2-methyl-2H-isothiazol-3-one	= 53 mg/kg (Rat)	-	-

#### Information on likely routes of exposure

##### Inhalation

<b>Kit Component</b> Inhalation	<b>11725: SignalStain® DAB Chromogen Concentrate</b> Harmful by inhalation
<b>Kit Component</b> Inhalation	<b>8114: SignalStain® Boost IHC Detection Reagent (HRP, Rabbit)</b> Avoid breathing vapors or mists
<b>Kit Component</b> Inhalation	<b>9579: Cleaved Caspase-3 (Asp175) (D3E9) Rabbit mAb</b> Avoid breathing vapors or mists
<b>Kit Component</b> Inhalation	<b>12960: Rabbit (DA1E) mAb IgG XP® SignalStain® Isotype Control</b> Avoid breathing vapors or mists

##### Eye contact

<b>Kit Component</b> Eye contact	<b>9579: Cleaved Caspase-3 (Asp175) (D3E9) Rabbit mAb</b> Avoid contact with eyes
<b>Kit Component</b> Eye contact	<b>12960: Rabbit (DA1E) mAb IgG XP® SignalStain® Isotype Control</b> Avoid contact with eyes
<b>Kit Component</b> Eye contact	<b>9997: Tris Buffered Saline with Tween® 20 (TBST-10X)</b> Avoid contact with eyes
<b>Kit Component</b> Eye contact	<b>11725: SignalStain® DAB Chromogen Concentrate</b> Irritating to eyes

##### Skin contact

<b>Kit Component</b> Skin contact	<b>9579: Cleaved Caspase-3 (Asp175) (D3E9) Rabbit mAb</b> Avoid contact with skin
<b>Kit Component</b>	<b>12960: Rabbit (DA1E) mAb IgG XP® SignalStain® Isotype Control</b>

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Skin contact Avoid contact with skin

**Kit Component**  
Skin contact **8114: SignalStain® Boost IHC Detection Reagent (HRP, Rabbit)**  
Repeated or prolonged skin contact may cause allergic reactions with susceptible persons

**Kit Component**  
Skin contact **11725: SignalStain® DAB Chromogen Concentrate**  
May cause irritation

### Ingestion

**Kit Component**  
Ingestion **9579: Cleaved Caspase-3 (Asp175) (D3E9) Rabbit mAb**  
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea

**Kit Component**  
Ingestion **12960: Rabbit (DA1E) mAb IgG XP® SignalStain® Isotype Control**  
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea

**Kit Component**  
Ingestion **11725: SignalStain® DAB Chromogen Concentrate**  
Harmful if swallowed

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

**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. 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 **11725: SignalStain® DAB Chromogen Concentrate**  
Irritating to eyes

### **Sensitization**

**Kit Component**  
Skin Sensitization **8114: SignalStain® Boost IHC Detection Reagent (HRP, Rabbit)**  
May cause an allergic skin reaction

### **Mutagenic effects**

**Kit Component**  
Mutagenic effects **11725: SignalStain® DAB Chromogen Concentrate**  
Suspected of causing genetic defects.

### **Carcinogenic effects**

**Kit Component**  
Carcinogenicity **11725: SignalStain® DAB Chromogen Concentrate**  
May cause cancer.

### **Reproductive toxicity**

## 12692 SignalStain® Apoptosis (Cleaved Caspase-3) IHC Detection Kit

**Kit Component**

Reproductive toxicity

**11724: SignalStain® DAB Diluent**

Product is or contains a chemical which is a known or suspected reproductive hazard.

**Systemic Target Organ Toxicity (STOT)**

No information available

**Aspiration Hazard**

No information available.

**11.2. Information on other hazards****Other adverse effects**

No information available.

### SECTION 12: Ecological information

**12.1. Toxicity****Product Information**

No information available

**Component Information**

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
glycerol	-	LC50 51 - 57 mg/L (Oncorhynchus mykiss) 96 h	EC50 500 mg/L (Daphnia magna) 24 h
acetonitrile	-	LC50 1600 - 1690 mg/L (Pimephales promelas) 96 h LC50 1650 mg/L (Poecilia reticulata) 96 h LC50 1850 mg/L (Lepomis macrochirus) 96 h LC50 1000 mg/L (Pimephales promelas) 96 h	EC50 5838 mg/L (Daphnia pulex) 18 h
trometamol	-	-	NOEC >100 mg/L (Selenastrum capricornutum) 96 h
1-Imidazole	EC50 82 mg/L (Desmodesmus subspicatus) 96 h EC50 130 mg/L (Desmodesmus subspicatus) 72 h	LC50 280 mg/L (Leuciscus idus) 48 h	EC50 341.5 mg/L (Daphnia magna) 48 h
sodium azide	EC50 0.35 mg/L (Pseudokirchneriella subcapitata) 96 h	LC50 0.8 mg/L (Oncorhynchus mykiss) 96 h LC50 5.46 mg/L (Pimephales promelas) 96 h LC50 0.7 mg/L (Lepomis macrochirus) 96 h	LC100 1 mg/L (Orconectes rusticus) 96 h
5-chloro-2-methyl-2H-isothiazol-3-one	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

**12.2. Persistence and degradability****Kit Component**

Persistence and degradability

**9997: Tris Buffered Saline with Tween® 20 (TBST-10X)**

Product is biodegradable

**Kit Component**

Persistence and degradability

**8112: SignalStain® Antibody Diluent**

Product is biodegradable

**Kit Component**

Persistence and degradability

**11725: SignalStain® DAB Chromogen Concentrate**

Readily biodegradable

**12.3. Bioaccumulative potential**

**Kit Component**                                    **9997: Tris Buffered Saline with Tween® 20 (TBST-10X)**  
Bioaccumulation                                    Does not bioaccumulate

**Kit Component**                                    **8112: SignalStain® Antibody Diluent**  
Bioaccumulation                                    Not likely to bioaccumulate

Chemical name	Octanol-Water Partition Coefficient
glycerol	-1.76
acetonitrile	-0.34
1-Imidazole	-0.08
5-chloro-2-methyl-2H-isothiazol-3-one	- 0.75

**12.4. Mobility in soil**

**Kit Component**                                    **9997: Tris Buffered Saline with Tween® 20 (TBST-10X)**  
Mobility    Will likely be mobile in the environment due to its water solubility

**Kit Component**                                    **8112: SignalStain® Antibody Diluent**  
Mobility    Mobile

**12.5. Results of PBT and vPvB assessment**

No information available.

**12.6. Endocrine disrupting properties**

**12.7. Other adverse effects**

No information available

**SECTION 13: Disposal considerations**

**13.1. Waste treatment methods**

**Waste from residues / unused products**                                    Dispose of in accordance with local regulations.

**Contaminated packaging**                                    Empty containers should be taken to an approved waste handling site for recycling or disposal.

**Other information**    Waste codes should be assigned by the user based on the application for which the product was used.

**SECTION 14: Transport information**

This material is subject to regulation as a hazardous material for shipping:

**IMDG/IMO**

**14.1 UN number**    UN1993  
**14.2 UN proper shipping name**                                    Flammable Liquid, N.O.S. (Contains: acetonitrile; cyanomethane)

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14.3 Transport hazard class(es)	3
14.4 Packing group	II
14.5 Environmental hazards	None
14.6 Special precautions for user	None
14.7 Maritime transport in bulk according to IMO instruments	Not regulated

**ADR/RID**

14.1 UN number	UN1993
14.2 UN proper shipping name	Flammable Liquid, N.O.S. (Contains: acetonitrile; cyanomethane)
14.3 Transport hazard class(es)	3
14.4 Packing group	II
14.5 Environmental hazards	None
14.6 Special precautions for user	None

**IATA**

14.1 UN number	UN1993
14.2 UN proper shipping name	Flammable Liquid, N.O.S. (Contains: acetonitrile; cyanomethane)
14.3 Transport hazard class(es)	3
14.4 Packing group	II
14.5 Environmental hazards	None
14.6 Special precautions for user	None

**SECTION 15: Regulatory information**

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)**

This product does not contain Substances of Very High Concern (SVHC).

**SEVESO Directive Information**

**International inventories**

TSCA 8(b)	-
DSL/NDSL	-
EINECS/ELINCS	-
ENCS	-
IECSC	-
KECL	-
PICCS	-
AICS	-

**International inventories legend**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AICS** - Australian Inventory of Chemical Substances

**15.2. Chemical safety assessment**

For this substance a chemical safety assessment has not been carried out

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**SECTION 16: Other information**

**Full text of H-Statements referred to under Sections 2 and 3**

H317 - May cause an allergic skin reaction  
H319 - Causes serious eye irritation  
H341 - Suspected of causing genetic defects  
H350 - May cause cancer

**Classification procedure:** Expert judgment and weight of evidence determination.

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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.