

Product name Glucose-6-Phosphate Dehydrogenase (G6PD) Activity Assay Kit
(M)SDS Number 12581 **Issuing Date:** 2024-03-22
Version 1

1. Identification

Product identifier

Product name Glucose-6-Phosphate Dehydrogenase (G6PD) Activity Assay Kit

Kit Component

- 13865: Tris Assay Buffer
- 96772: G6PDH Substrate (40X)
- 80415: G6PDH Cofactor (100X)
- 49233: NADP+ (100X)
- 76535: G6PDH Developer (100X)
- 38611: G6PDH Positive Control (100X)
- 7018: PathScan® Sandwich ELISA Lysis Buffer (1X)

Hazardous Components

80415: G6PDH Cofactor (100X)
49233: NADP+ (100X)
7018: PathScan® Sandwich ELISA Lysis Buffer (1X)

Other means of identification

(M)SDS Number 12581

Contains

Chemical name	English chemical name	CAS No
d-Glucose, 6-(dihydrogen phosphate), monosodium salt	d-Glucose, 6-(dihydrogen phosphate), monosodium salt	54010-71-8
7-sodiooxy-3H-phenoxazin-3-one 10-oxide	7-sodiooxy-3H-phenoxazin-3-one 10-oxide	62758-13-8
Dehydrogenase, lipoamide	Dehydrogenase, lipoamide	9001-18-7
trometamol	trometamol	77-86-1
acetone	acetone	67-64-1
polyethylene glycol	Polyethylene glycol	9002-93-1
p-(1,1,3,3-tetramethylbutyl)phenylether	p-(1,1,3,3-tetramethylbutyl)phenylether	
sodium fluoride	sodium fluoride	7681-49-4
Dehydrogenase, glucose 6-phosphate	Dehydrogenase, glucose 6-phosphate	9001-40-5

Details of the supplier of the safety data sheet

Product name Glucose-6-Phosphate Dehydrogenase (G6PD) Activity Assay Kit
Revision Date: 2024-03-22
(M)SDS Number 12581

Manufacturer Cell Signaling Technology, Inc. 3 Trask Lane Danvers, MA 01923 United States TEL: +1 978 867 2300 FAX: +1 978 867 2400	Importer Cell Signaling Technology, Inc. Building 7 A-SUN Science & Technology Park 399 Shengxia Road Pudong Shanghai 201210 China TEL: 4006-473287 FAX: (86) 21-5835-6116	Supplier No information available
--	---	---

E-mail address support@cellsignal.com

Emergency telephone number

Emergency telephone 400 120 4937

Recommended use of the chemical and restrictions on use

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

Restrictions on use No information available

2. Hazard(s) identification

Emergency Overview

Causes skin irritation
Causes serious eye irritation
May cause respiratory irritation

Appearance See section 9

Physical state See section 9

Odor See section 9

Classification of the substance or mixture

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Specific target organ toxicity - Single exposure	Category 3

Label elements



Signal Word
Warning

Hazard Statements
Causes skin irritation
Causes serious eye irritation
May cause respiratory irritation

Prevention
Avoid breathing dust/fume/gas/mist/vapors/spray.

Wash face, hands and any exposed skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.

Response

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF ON SKIN: Wash with plenty of soap and water.
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.
If eye irritation persists: Get medical advice/attention.
Call a POISON CENTER or doctor if you feel unwell

Storage

Store locked up.

Disposal

Dispose of contents/container to an approved waste disposal plant

Physical and chemical hazards

Not applicable.

Health hazards

Immediate Health Effects: Not applicable.
Chronic effects: Not applicable.

Environmental hazards

Not applicable.

Other hazards which do not result in classification

No information available.

3. Composition/information on ingredients

Kit Component 13865: Tris Assay Buffer

Chemical name	CAS No	Weight-%	Other information
trometamol	77-86-1	0.45	-

Kit Component 96772: G6PDH Substrate (40X)

Chemical name	CAS No	Weight-%	Other information
d-Glucose, 6-(dihydrogen phosphate), monosodium salt	54010-71-8	100	-

Kit Component 80415: G6PDH Cofactor (100X)

WARNING: Causes serious eye irritation. Causes skin irritation. May cause respiratory irritation.

Chemical name	CAS No	Weight-%	Other information
Dehydrogenase, lipoamide	9001-18-7	60-100	-
trometamol	77-86-1	10-30	-

Product name Glucose-6-Phosphate Dehydrogenase
(G6PD) Activity Assay Kit
Revision Date: 2024-03-22

(M)SDS Number

12581

surrounding environment.

Unsuitable Extinguishing Media No information available.

Specific hazards arising from the chemical Thermal decomposition can lead to release of irritating gases and vapors.

Special protective actions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.
Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. For personal protection see section 8.

For emergency responders Use personal protection recommended in Section 8.

Environmental precautions Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. See Section 12 for more information.

Methods and material for containment and cleaning up Prevent further leakage or spillage if safe to do so. Cover liquid spill with sand, earth or other noncombustible absorbent material. Pick up and transfer to properly labeled containers.

Precautions to prevent secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. Handling and storage

Precautions for safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. See Section 8 for information on appropriate personal protective equipment.

Conditions for safe storage, including any incompatibilities Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials None known based on information supplied.

8. Exposure controls/personal protection

Occupational exposure limits

Chemical name	China	ACGIH TLV
acetone - 67-64-1	TWA 300 mg/m ³ STEL 450 mg/m ³	STEL 750 ppm TWA : 500 ppm
sodium fluoride - 7681-49-4	TWA 2 mg/m ³ STEL 5 mg/m ³ TWA 2 mg/m ³ STEL 5 mg/m ³	TWA : 2.5 mg/m ³

Biological occupational exposure limits

Product name Glucose-6-Phosphate Dehydrogenase
(G6PD) Activity Assay Kit
Revision Date: 2024-03-22

(M)SDS Number

12581

Chemical name	Biological standards	Monitoring and observation processes	ACGIH
acetone - 67-64-1			50
sodium fluoride - 7681-49-4			2 3

Monitoring and observation processes

No applicable information was found.

Engineering controls

Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection

Tight sealing safety goggles.

Skin and body protection

Wear suitable protective clothing.

Hand protection

Impervious gloves.

Respiratory protection

Use appropriate respiratory protection.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Information on basic physical and chemical properties

Kit Component

Physical state
Appearance
Color
pH

13865: Tris Assay Buffer

Liquid
Clear
Colorless
8

Kit Component

Physical state
Appearance
Color

96772: G6PDH Substrate (40X)

Solid
Powder, Lyophilized
White

Kit Component

Physical state
Appearance
Color

80415: G6PDH Cofactor (100X)

Solid
Powder, Lyophilized
Yellow

Kit Component

Physical state
Appearance
Color
Solubility

49233: NADP+ (100X)

Solid
Powder, Lyophilized
Off-white
Soluble in water

Kit Component

Physical state
Appearance
Color

76535: G6PDH Developer (100X)

Solid
Powder, Lyophilized
Grey

Product name Glucose-6-Phosphate Dehydrogenase
(G6PD) Activity Assay Kit
Revision Date: 2024-03-22

(M)SDS Number

12581

Kit Component

Physical state
Appearance
Color

38611: G6PDH Positive Control (100X)

Solid
Powder, Lyophilized
White

Kit Component

Physical state
Appearance
Color
pH

7018: PathScan® Sandwich ELISA Lysis Buffer (1X)

Liquid
Clear
Colorless
7.5

10. Stability and reactivity

Stability Stable under normal conditions.

Possibility of hazardous reactions None under normal processing.

Conditions to Avoid Extremes of temperature and direct sunlight.

Incompatible products Strong oxidizing agents.

Hazardous Decomposition Products Thermal decomposition can lead to release of irritating gases and vapors: Nitrogen oxides (NOx), Carbon oxides (COx).

11. Toxicological information

Acute Toxicity

Numerical measures of toxicity

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
trometamol	5900 mg/kg (Rat)	-	-
polyethylene glycol p-(1,1,3,3-tetramethylbutyl)phenylet her	= 1800 mg/kg (Rat)	-	-
sodium fluoride	= 52 mg/kg (Rat)	= 175 mg/kg (Rat)	-

Symptoms Irritating to eyes and skin.

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Sensitization No information available.

Mutagenic effects No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

Product name Glucose-6-Phosphate Dehydrogenase
(G6PD) Activity Assay Kit
Revision Date: 2024-03-22

(M)SDS Number

12581

Specific target organ toxicity (single exposure) No information available

Specific target organ toxicity (repeated exposure) No information available

Kit Component **80415: G6PDH Cofactor (100X)**
STOT - single exposure May cause respiratory irritation

Kit Component **49233: NADP+ (100X)**
STOT - single exposure May cause respiratory irritation

Aspiration hazard No information available.

12. Ecological information

Ecotoxicity The environmental impact of this product has not been fully investigated.

Product Information No information available

Component Information

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
acetone	-	LC50 6210 - 8120 mg/L (Pimephales promelas) 96 h LC50 8300 mg/L (Lepomis macrochirus) 96 h LC50 4.74 - 6.33 mL/L (Oncorhynchus mykiss) 96 h	EC50 12600 - 12700 mg/L (Daphnia magna) 48 h EC50 10294 - 17704 mg/L (Daphnia magna) 48 h
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
sodium fluoride	EC50 850 mg/L (Desmodesmus subspicatus) 72 h EC50 272 mg/L (Pseudokirchneriella subcapitata) 96 h	LC50 530 mg/L (Lepomis macrochirus) 96 h LC50 180 mg/L (Pimephales promelas) 96 h LC50 38 - 68 mg/L (Oncorhynchus mykiss) 96 h LC50 830 mg/L (Lepomis macrochirus) 96 h	EC50 98 mg/L (Daphnia magna) 48 h EC50 338 mg/L (Daphnia magna) 48 h

Persistence and degradability No information available

Bioaccumulative potential No information available

Chemical name	Octanol-Water Partition Coefficient
acetone	-0.24

Mobility in soil No information available

13. Disposal considerations

<u>Waste chemicals</u>	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Do not empty into drains; dispose of this material and its container in a safe way.
<u>Contaminated packaging</u>	Do not reuse empty containers.

14. Transport information

<u>IMDG/IMO</u>	Not regulated
<u>IATA</u>	Not regulated
<u>China</u>	Not regulated

Special precautions for user

Please refer to the applicable dangerous goods regulations for additional information

15. Regulatory information

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

National regulations

Law of the People's Republic of China on Prevention and Control of Occupational Diseases

Catalog of occupational hazard factors:	Not applicable
Catalog of occupational diseases:	Not applicable

Regulations on the Control over Safety of Hazardous Chemicals

<u>Inventory of hazardous chemicals</u>	Not applicable
---	----------------

<u>GB 18218-2009 Identification of major hazard installations for dangerous chemicals</u>	Not applicable
---	----------------

List of hazardous chemicals under priority management	Not applicable
--	----------------

Regulations on Labor Protection in Workplaces Where Toxic Substances Are Used

Inventory of highly toxic goods	Not applicable
---------------------------------	----------------

Regulations for Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

List of toxic chemicals severely restricted for import and export in China	Not applicable
--	----------------

Measures for the Environmental Management of New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances	Contact supplier for inventory compliance status.
--	---

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer	Not applicable
---	----------------

The Stockholm Convention on Persistent Organic Pollutants	Not applicable
--	----------------

The Rotterdam Convention	Not applicable
---------------------------------	----------------

16. Other information

Issuing Date: 2024-03-22

Revision Note The symbol (*) in the margin of this SDS indicates that this line has been revised.

Abbreviations and acronyms

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA:	Time weighted average	STEL:	Short term exposure limit
Ceiling:	Maximum limit value:	*	Skin designation
C	Carcinogen		

Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AELGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

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