

SECTION I - Product description

Product Name	Intracellular Glutathione (GSH) Labeling Kit
Product Number	PK057/4634
Product Classification	Cell Biology Reagents
Company description	<p>Horváth Corina Sövegstrasse 6/3b 6726 Felsőörsény Hungary Phone: +36221-679310 Email: info@promokine.com</p>

SECTION II - Composition / formula / ingredients

Product Name	CAS No	EC No	MW	Chemical Formula
DMSO	67685	200643	7813	C2H6S

SECTION III - Hazard information

Component	Description	Volume	Hazard Information
Assay Buffer	Liquid	50ml	No hazards
Microtubulinase (MTB)	Contains DMSO	1ml	See below

DMSO

Emergency Overview

Ch Hazards: Combustible liquid Target organ effect

Acute: Causes Eye, Skin

Ch Classification: Flammable liquids (Category 4)

Ch Labels: Irritant, Acute Toxicity

Hazard Code:

Sentences: S11, S22

P Hazard statements: H227 Combustible liquid

P Hazard statements: H314 Causes severe eye irritation

HMS Classification:

Health hazard 0

Chronic health hazard*

Environmental 2

Physical hazards 0

NEPA flag

Health hazard 0

Health hazard 0

Health hazard 0

Health hazard 0

Inhalation: May cause respiratory tract irritation

Skin: May cause skin irritation

Eyes: May cause eye irritation

Ingestion: May cause harm if swallowed

Additional Information: Contains DMSO, which is a known toxicological irritant. DMSO is readily absorbed through skin and may carry substances into the body.

SECTION IV—HLS/AD VALUES

Control Policy Consult physician. Stop work if you have had to be taken to the hospital. Move to fresh air area if irritation occurs. If irritation persists, consult physician. If irritation persists, consult physician. If irritation persists, consult physician. If irritation persists, consult physician.

SECTION IV—Hiring/ing values

DMO
Site cleaning instructions: For small (inert) fires, use foam, dry chemical, or carbon dioxide. For large fires, apply water from as close as possible. Use eye washes and flushes (flush for 15 minutes) if splash or spray. Solid streams may be used to extinguish fires. Use of foam, dry chemical, or carbon dioxide is not recommended. Use of foam, dry chemical, or carbon dioxide is not recommended. Use of foam, dry chemical, or carbon dioxide is not recommended.

SECTION IV—Accident Release Values

Personal protection: Use personal protective equipment. Acid breathing vapors, mist, or gas. Ensure adequate ventilation. Avoid skin contact. Avoid inhalation.
Environmental protection: Prevent release or spillage if safe to do so. Do not let product enter drains. Discharge into sewerage must be controlled.
Mitigation/containment: Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers or sealed.

SECTION VI—Handling/usage

Precautions for safe handling: Acid fumes and vapors. Avoid contact with skin and eyes.
Critical safe space: Keep containers tightly closed in a dry, well-ventilated area.
Retention/usage temperature: -20°C

SECTION VII—Exposure Control/Personal Protection

DMO

COMPONENTS	CAS NO	VALUE	CONTROL METHODS	RECS
Dimethyl sulfoxide	67685	TWA	20ppm	LD50 (VK1001) 1.0ml/kg (VIT) Exposure limit (VIT)

Personal protective equipment:
Respiratory protection:
 In most cases, short duration, self-contained breathing apparatus (SCBA) or full-face respirator with multi-purpose combination (US type A or EN 143) respirator cartridges as a backup to clean air canisters. If the respirator is the sole mode of protection, use a full-face supplied-air respirator. Use respirator and components tested and approved under applicable government standards such as NIOSH (US) or EN 182 (EU).

Hand protection:
 Full gloves. Do not be in contact with product. Use proper decontamination technique (without touching gloves) on surface to avoid skin contact with product. Dispose of contaminated gloves after use in accordance with applicable government regulations. Wash hands.

Eye protection:
 Full face protection. Full face shield (8 inch minimum). Use equipment for eye protection tested and approved under applicable government standards such as NIOSH (US) or EN 180 (EU).

Skin/body protection:
 Complete protection against chemicals. The type of protective equipment must be selected according to the concentration and amount of the hazardous substance and the specific workplace.

Hygiene practices:
 Handle in accordance with good industrial hygiene and safety practice. Wash hands before meals and after work.

SECTION IX—Physical and Chemical Properties

Property	LMVU
Appearance	White liquid
pH	10.0-11.0
Vapor Solubility	Very slightly soluble
Water Solubility	Insoluble
Boiling Point (°C)	187.0 (327 F)
Melting Point (°C)	16.5 (61.7 F)
Flash Point (°C)	87.0 (189 F)
Ignition Temperature (°C)	301.0 (574 F)
Leakage	1.1 g/ml

SECTION IX—Safety and Health

Property	LMVU
Chemical stability	Stable under recommended storage conditions
Corrosive/irritant	Refr. (acid), alkalis, acids
Miscible/soluble	Aromatic hydrocarbons, alcohols, glycols, esters, ketones, acetone, ether, etc.
Hazardous decomposition products	Carbon oxides, sulfur oxides

SECTION IX—Biological Information

DMG

Acute toxicity: LD₅₀ (rat) = 1450 mg/kg
 (Guinea pig) = 4h = 4200 mg
 (Dose) = 500 mg/kg
Skin corrosion/irritation: Skin—rabbit—no irritation—4h
Eye irritation: Eyes—rabbit—mild irritation
Respiratory sensitization: Guinea pig
Control: Guinea pig—nose—Intratracheal—Cytotoxicity analysis
Control: Guinea pig—nose—Intratracheal—Malonaldehyde formation
Control: Guinea pig—nose—Intratracheal—Cytotoxicity analysis
Control: Guinea pig—nose—Intratracheal—DNA damage
Genotoxicity: Guinea pig—nose—GA → Induction of oral tumorigenicity by RIEC criteria
Genotoxicity: Guinea pig—nose—GA → Induction of oral tumorigenicity by RIEC criteria
Leukemia: Guinea pig—nose—GA → Induction of leukemia by RIEC criteria
ARC: No compound in this group is a lead candidate for a 0% incidence of adverse effects possible in humans based on ARC
ACGIH: No compound in this group is a lead candidate for a 0% incidence of adverse effects based on ACGIH
NTP: No compound in this group is a lead candidate for a 0% incidence of adverse effects based on NTP
CSA: No compound in this group is a lead candidate for a 0% incidence of adverse effects based on CSA
Reproductive toxicity: Reproductive toxicity—rat—Intratracheal → Effects on fertility, abortion
Reproductive toxicity: Reproductive toxicity—rat—Intratracheal → Effects on fertility, postnatal mortality (eg, dead pups, resorbed implants, perinatal number of pups)
Reproductive toxicity: Reproductive toxicity—rat—Subcutaneous → Effects on fertility, postnatal mortality (eg, dead pups, resorbed implants, perinatal number of pups), Effects on fertility, litter size (eg, # of pups per litter, new pups per death)
Reproductive toxicity: Guinea pig—GA → Effects on fertility, postnatal mortality (eg, reduction in number of pups per female, perinatal number of pups, congenital defects), Effects on number of fetuses, Fetal toxicity (eg, perinatal death, eg, stillborn fetuses), Stillborn fetuses, abnormalities, non-implantation
Genotoxicity: Guinea pig—nose—Intratracheal → Effects on number of fetuses, Fetal toxicity (eg, perinatal death, eg, stillborn fetuses), Stillborn fetuses, abnormalities, non-implantation
Sublethal toxicology—sublethal dose (GD) rodent acute
Sublethal toxicology—sublethal dose (GD) rodent acute
Acute/chronic rodent acute
Perinatal effects
Inhalation: Guinea pig—nose—Intratracheal → Guinea pig respiratory tract irritation
Skin: Guinea pig—nose—Intratracheal → Guinea pig skin irritation
Eyes: Guinea pig—nose—Intratracheal → Guinea pig eye irritation

Section 14, which will be allowed.
 Approval of the California Air Resources Board (CARB) is required for all materials with known
 or suspected carcinogenicity. CARB is currently reviewing the following materials in its review
 process:

Section VII - Ecological Information

LD50
 Inhalation (respirable dust): rodent acute
 LC50 - 0.1 mg/m³ (4-hr exposure) - 34,000 ng/l - 96h
 LC50 - 0.1 mg/m³ (4-hr exposure) - 3,000 ng/l - 96h
 LC50 - 0.1 mg/m³ (4-hr exposure) - 27,500 ng/l
 LC50 - 0.1 mg/m³ (4-hr exposure) - >40,000 ng/l - 96h
 Further information on ecology, rodent acute

Section VIII - Physical Properties

Product: Crystalline solid
 Contains no volatile organic compounds (VOCs)

Section IX - Regulatory Information

LD50
 UN No. 1993, Class CB, Packing group III, Flammable liquid, non (Dinityl sulfide);
 Marine pollutant, No Flashpoint Hazard
 IATA No. 6000, 6000s
 IATA No. 6000, 6000s

Section X - Regulatory Information

OSHA Hazards Combustible liquid Target organ: eye
SARA 302 Components SARA 302 Not a hazardous material as subject to the reporting requirements of SARA Title III,
 Section 302
SARA 303 Components SARA 303 This material does not contain any chemical components with known CAS numbers that
 exceed the reportable quantities established by SARA Title III, Section 303
SARA 311/312 Hazards Irritant - Health Hazard
Miscellaneous Hazard Information No component is subject to the Massachusetts Right to Know Act
Federal Hazardous Waste Information System (HWIS) Dinityl sulfide CAS No. 67685-19-5, Personal Care 2070301
California Proposition 65 This product does not contain any chemicals known to the State of California to cause cancer, birth
 defects, or any other reproductive harm.

EU Regulations

Component	HSKHTAES	SKEYHTAES
LD50	RU/R603/36	S42, S63/34, 36

Section XI - Disposal

The above information is given to be correct but does not purport to be all inclusive and shall be used only as a guide. The
 information in this document is based on the present state of knowledge and is subject to change without notice. We do not
 accept any liability for any damage or injury resulting from the use of the product. Hazardous materials should be
 recycled or disposed of according to local, state, and federal regulations.

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