

Material Safety Data Sheet

according to EC-Regulation No. 1272/2008

updated: 02/2016

Version: 1.0

Section I - Product and Company Information

Product Name	Calpain Inhibitor, Z-LLY-FMK
Product Number	PK-CA577-1125-20C
Product Classification	Cell Biology Reagents
Company and Contact Information	PromoCell GmbH Sickingenstrasse 63/65 69126 Heidelberg Germany Phone: +49 6221 – 649 34 0 E-mail: info@promokine.info

Section II – Composition/Information on Ingredients

Component	CAS Number	EC-No.	MW	Chemical Formula
DMSO	67-68-5	200-664-3	78.13	C ₂ H ₆ OS

Section III – Hazard Information

Component	Description	Volume	Safety Information
Calpain Inhibitor, Z-LLY-FMK Z-Leu-Leu-Tyr-FMK FMK (fluoromethyl ketone)	10 mM in DMSO	20 µl	See below

NOTE: The safety data shown below is based on pure ingredients: The amount in this kit comprises much less.

DMSO:

Emergency Overview

OSHA Hazards: Combustible Liquid, Target Organ Effect

Target Organs: Eyes, Skin

GHS Classification: Flammable liquids (Category 4)

GHS Label elements, including precautionary statements

Pictogram: none

Signal word: Warning

Hazard statement(s): H227 Combustible liquid

Precautionary statement(s): none

HMS Classification

Health hazard: 0

Chronic Health Hazard: *

Flammability: 2

Physical hazards: 0

NFPA Rating

Health hazard: 0

Fire: 2

Reactivity Hazard: 0

Potential Health Effects

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Skin: May be harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

Ingestion: May be harmful if swallowed.

Aggravated Medical Condition: Avoid contact w/DMSO solutions containing toxic materials or materials with unknown toxicological properties. DMSO is readily absorbed through skin and may carry such materials into the body.

Section IV – First Aid Measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Section V – Fire-Fighting Measures

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters: Wear self-contained breathing apparatus for firefighting if necessary.

Further information: Flash point 87 °C (189 °F) - closed cup: Ignition temperature 301 °C (574 °F) (for DMSO)

Section VI – Accidental Release Measures

Personal precautions: Avoid breathing vapors, mist or gas. Avoid dust formation. Ensure adequate ventilation.

Environmental precautions: Do not let product enter drains.

Methods for cleaning up: Sweep up and keep in suitable, closed containers for disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section VII – Handling and Storage

Precautions for safe handling

Keep away from sources of ignition—no smoking. Take measures to prevent the build up electrostatic charge.

Conditions for safe storage

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

Recommended storage temperature: -20 °C

Section VIII – Exposure Controls/Personal Protection

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection

Respiratory protection is not required. Where protection is desired, use multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

For prolonged or repeated contact use protective gloves.

Eye protection

Chemical safety goggles

Skin and body protection

Hygiene measures

General industrial hygiene practice.

Section IX – Physical and Chemical Properties

Property	DMSO
Appearance:	Clear liquid
pH:	No data available
Water Solubility:	Completely miscible
Other Solubility:	No data available
Boiling Point (°C):	189 °C

Melting Point (°C):	18.4 °C
Flash Point (°C):	87 °C
Ignition Temp. (°C):	301 °C
Density:	1.1 g/ml

Section X – Stability and Reactivity

Property	DMSO
Chemical stability:	Stable under recommended storage conditions
Conditions to avoid:	Not available
Materials to avoid:	Acid chlorides, Phosphorus halides, Strong acids, Strong oxidizing agents, Strong reducing agents
Hazardous decomposition products:	Carbon oxides, sulfur oxides

Section XI – Toxicological Information

DMSO

Acute toxicity: LD50 Oral - rat - 14,500 mg/kg

LC50 Inhalation - rat - 4 h - 40250 ppm

LD50 Dermal - rabbit - > 5,000 mg/kg

Skin corrosion/irritation: Skin – rabbit – mild skin irritation – 24h

Serious eye damage/eye irritation: Eyes – rabbit – mild eye irritation

Respiratory/skin sensitization: no data available

Germ cell mutagenicity: Genotoxicity in vitro - mouse – lymphocyte→Cytogenetic analysis

Genotoxicity in vitro - mouse – lymphocyte→Mutation in mammalian somatic cells.

Genotoxicity in vivo - rat – Intraperitoneal→ Cytogenetic analysis

Genotoxicity in vivo - mouse – Intraperitoneal→DNA damage

Carcinogenicity: Carcinogenicity – rat – Oral→Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Skin & Appendages:

Other: Tumors.

Carcinogenicity – mouse – Oral→Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Leukaemia Skin & Appendages:

Other: Tumors.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: Reproductive toxicity – rat – Intraperitoneal→Effects on Fertility: Abortion.

Reproductive toxicity – rat – Intraperitoneal→Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).

Reproductive toxicity – rat – Subcutaneous→ Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Effects on Fertility: Litter size (e.g.; # fetuses per litter; measured before birth).

Reproductive toxicity –mouse – Oral→Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea). Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Specific Developmental Abnormalities: Musculoskeletal system.

Teratogenicity: Developmental Toxicity - mouse – Intraperitoneal→Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Musculoskeletal system

Additional Information: RTECS: PV6210000

Section XII – Ecological Information

DMSO:

Toxicity: Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 34,000 mg/l - 96 h; LC50 - Oncorhynchus mykiss (rainbow trout) - 35,000 mg/l - 96 h;

Toxicity to daphnia and other aquatic invertebrates; EC50 - Daphnia pulex (Water flea) - 27,500 mg/l

Toxicity to algae EC50 - Lepomis macrochirus (Bluegill) - > 400,000 mg/l - 96 h

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

Section XIII – Disposal Information

Product: Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging: Dispose of as unused product.

Section XIV – Transport Information

DMSO

DOT (US): UN-Number: 1993 Class: CBL Packing group: III; Proper shipping name: Combustible liquid, n.o.s. (Dimethyl sulfoxide)

Marine pollutant: No; Poison Inhalation Hazard: No

IMDG: Not dangerous goods

IATA: Not dangerous goods

Section XV – Regulatory Information

OSHA Hazards: DMSO: Combustible Liquid, Target Organ Effect

DSL Status: All components of this product are on the Canadian DSL list.

SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title II, Section 313.

SARA 311/312 Hazards: DMSO: Fire Hazard, Chronic Health Hazard

Massachusetts Right To Know Components: No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components: Dimethyl sulfoxide CAS-No. 67-68-5

New Jersey Right To Know Components: Dimethyl sulfoxide CAS-No. 67-68-5

California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

EU Regulations:

Component	Risk Phrases	Safety Phrases
DMSO	R10, R36/37/38	S24/25, S36/37/39, S45

Section XVI - Disclaimer

The above information is believed 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 our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. PromoCell shall not be held liable for any damage resulting from handling or from contact with the above product

FOR IN VITRO RESEARCH USE ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC PROCEDURES.

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