



## MATERIAL SAFETY DATA SHEET

### Glutathione Reductase (GSR) Fluorescent Kit

#### SECTION 1. IDENTIFICATION

<b>Product name</b>	<b>Glutathione Reductase (GSR) Fluorescent Kit</b>
<b>Catalogue number</b>	<b>ZX-33104-96</b>
<b>Manufacturer or supplier's details</b>	ZellBio GmbH . Krantorweg 48c . 13503 Berlin
<b>Telephone</b>	0049-30 81309085
<b>Fax</b>	0049-30 81309086
<b>Email</b>	support@zellx.de

#### SECTION 2. HAZARDS IDENTIFICATION



Regulation (EC) No. 1272/2008 [CLP/GHS]

Dimethyl sulfoxide

Flammable, Category 4  
Irritant, Class 2

Hazard statements

Combustible liquid.  
May be harmful if inhaled, absorbed through skin, swallowed.  
May be irritating to eyes, respiratory system and skin.  
Harmful to aquatic organisms.

Precautionary statements

Keep away from heat, open flames, hot surfaces, sparks.  
Wash hands thoroughly after handling.  
Wear protective gloves, clothing, and eye/face protection.

#### SECTION 3. FIRST AID MEASURES

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

If inhaled, remove to fresh air. Seek medical attention if any respiratory symptoms develop.

**In case of skin contact**

Rinse with copious amounts of water and wash thoroughly with soap and water. If irritation or discomfort develops seek medical attention.

**In case of eye contact  
If swallowed**

Rinse eyes with water as a precaution.

If swallowed, wash out mouth with water if person is conscious.

#### SECTION 4. INFORMATION ON INGREDIENTS

**Components:**

Glutathione Reductase Standard (C023-40UL)

ThioStar® Detection Reagent (C025-1EA)

Dry DMSO (X022-2ML)

NADPH (X032-1EA)

NADPH Diluent (X034-5ML)

Assay Buffer Concentrate (X021-60ML)

Oxidized Glutathione (C024-3ML)

Description:	Chemical Name	CAS No	Percent
DMSO, X022-2ML, contains:	Dimethyl sulfoxide	67-68-5	100%

Additional components of the kit are non-hazardous or the specific chemical identity and/or exact percentage (concentration) of composition have been withheld as a trade secret.

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#### SECTION 5. FIRE-FIGHTING MEASURES

**Extinguishing Media**

Suitable: Water spray. Carbon Dioxide, dry chemical powder, or appropriate foam.

**Firefighting**

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

#### SECTION 6. ACCIDENTAL RELEASE MEASURES

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

Use personal protective equipment. Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

**Methods and materials for containment and cleaning up**

Keep in suitable, closed containers for disposal.

**Environmental precautions**

Discharge into drains should be avoided.

#### SECTION 7. HANDLING AND STORAGE

**Handling**

Avoid getting components of this kit on you or in you. Do not breathe vapor.  
Always wear appropriate protective clothing. Always wash hands and other exposed areas thoroughly after using this kit. Do not eat or drink while using this kit.  
Qualified and experienced professionals should only handle this kit.

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**Storage**

Store according to the package insert instructions.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Engineering Controls**

No special engineering controls are required when working with this kit. Use with adequate ventilation.

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**Protective Equipment**

Safety glasses are recommended to prevent eye contact. Chemical resistant gloves, lab coat should be worn to prevent skin contact.

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**SECTION 9. STABILITY AND REACTIVITY**

**Stability  
Materials to Avoid  
Incompatibilities**

This material is stable until the expiration date on the kit if stored as directed.  
Heat, flames, sparks. Moisture.  
Strong oxidizing or reducing agents, acid chlorides, phosphorus halides, strong acids.

**SECTION 10. TOXICOLOGICAL INFORMATION**

**Route of Exposure**

**Skin Contact:** May cause skin irritation.  
**Skin Absorption:** May be harmful if absorbed through the skin.  
**Eye Contact:** May cause eye irritation.  
**Inhalation:** May be harmful if inhaled. May be irritating to respiratory tract.  
**Ingestion:** Harmful if swallowed.

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**Symptoms of Exposure**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**SECTION 11. ECOLOGICAL INFORMATION**

**Toxicity**

**Fish:** LC50 – Pimephales promelas (fathead minnow) – 34g/L, 96h  
LC50 – Oncorhynchus mykiss (rainbow trout) – 35g/L, 96h  
**Aquatic invertebrates:** ED50 – Daphnia magna (water flea) – 26 g/L, 48h  
**Algae:** ED50 – Pseudokirchneriella subcapitata (green algae) – 17g/L, 72h

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**Persistence / degradability**  
**Bioaccumulative potential:**  
**Mobility in soil**  
**Results of PBT/vPvB assessment**  
**Other adverse effects**  
**Stability in water**

31% - According to results of test of biodegradability this product is not readily biodegradable (OECD Test Guideline 301D).  
No data available.  
No data available.  
No data available.  
No data available.  
-0.12 – 1.2h at 30°C, Hydrolyses readily.

## SECTION 12. DISPOSAL CONSIDERATIONS

**Appropriate Method of Disposal of Substance**

Dispose of waste materials, unused components and contaminated packaging in compliance with country, state, district and local regulations. If unsure of the applicable requirements, contact the authorities for information.

## SECTION 13. TRANSPORT INFORMATION

**U.S. and Canadian Transportation; DOT**

**Proper Shipping Name:** Chemical Kits  
**UN Identification Number:** 1789  
**Class and Description:** 8, Miscellaneous  
**Packing Group:** N/A  
**Hazard Label:** Class 8

**International Air Transportation (IATA)**

**Proper Shipping Name:** Chemical Kits  
**UN Identification Number:** 1789  
**Class and Description:** 8, Miscellaneous  
**Packing Group:** III Hazard  
**Label Class:** 8

## SECTION 14. REGULATORY INFORMATION

**Product related information**  
**Safety Statements**  
**Risk Statements**  
**U.S. Regulatory Information**

The product is not subject to classification according to the sources of literature known to us.  
Observe general safety regulations when handling chemicals.

Avoid release to the environment.  
Harmful if swallowed.  
Sara Listed: No

## SECTION 15. OTHER INFORMATION

**Department**

R&D - ZELLX project - ZellBio GmbH

**Last Revision**

**Disclaimer:**

09.12.2019

For Research Use Only. Not for diagnostic, therapeutic, or other uses.

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The information contained in this document is accurate to the best of our knowledge and is provided in good faith. This document is intended only as a guide to the appropriate precautionary handling of the materials contained in this kit by properly trained personnel using this kit. Final determination or suitability of any materials is the sole responsibility of the user. ZELLX® shall not be held liable for any damage resulting from use or handling of this product.

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**Other Information**

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