

## Safety Data Sheet

### SECTION 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Catalog Number: AKR-100  
Product Name:  $\beta$ -Galactosidase Staining Kit  
Recommended Use: Laboratory Research Reagents

**MANUFACTURER:**

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### SECTION 2. HAZARDS IDENTIFICATION

100X Fixing Solution (Part No. 40010): One tube – 1.5 mL

**Classification:**

Acute toxicity, Oral, Category 4 (H302)  
Acute toxicity, Inhalation, Category 4 (H332)  
Skin corrosion, Category 1B (H314)  
Serious eye damage, Category 1 (H318)  
Respiratory sensitization, Category 1 (H334)  
Skin sensitization, Category 1 (H317)  
Acute aquatic toxicity, Category 1 (H400)  
Chronic aquatic toxicity, Category 2 (H411)

<b>Pictogram</b>	
<b>Signal Word</b>	Danger
<p><b>Hazard Statements:</b> Harmful if swallowed or if inhaled (H302 + H332), Causes severe skin burns and eye damage (H314), May cause an allergic skin reaction (H317), May cause allergy or asthma symptoms or breathing difficulties if inhaled (H334), May cause respiratory irritation (H335), Very toxic to aquatic life (H400), Toxic to aquatic life with long lasting effects (H411).</p>	
<p><b>Precautionary Statements:</b> Avoid breathing dust/fume/gas/mist/vapors/spray (P261), Wash skin</p>	

thoroughly after handling (P264), Do not eat, drink, or smoke when using this product (P270), Use only outdoors or in a well-ventilated area (P271), Contaminated work clothing should not be allowed out of the workplace (P272), Avoid release to the environment (P273), Wear protective gloves/protective clothing/eye protection/face protection (P280), In case of inadequate ventilation wear respiratory protection (P285), IF SWALLOWED: call a POISON CENTER if you feel unwell. Rinse mouth (P301 + P312 + P330), IF SWALLOWED: rinse mouth. Do NOT induce vomiting (P301 + P330 + P331), IF ON SKIN (or hair): take off immediately all contaminated clothing Rinse skin with water/shower (P303 + P361 + P353), IF INHALED: remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER / doctor (P304 + P340 + P310), IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER / doctor (P305 + P351 + P338 + P310), If skin irritation or rash occurs: get medical advice/attention (P333 + P313), If experiencing respiratory symptoms: Call a POISON CENTER / doctor. (P342 + P311), Wash contaminated clothing before reuse (P363), Collect spillage (P391), Store locked up (P405), Dispose of contents/container to an approved waste disposal plant (P501).

Staining Solution A (Part No. 40011): One tube – 1.5 mL

**Classification:**

Acute aquatic toxicity, Category 1 (H400)

Chronic aquatic toxicity, Category 2 (H411)

<b>Pictogram</b>	None
<b>Signal Word</b>	None
<b>Hazard Statements:</b> Harmful to aquatic life with long lasting effects (H412).	
<b>Precautionary Statements:</b> Avoid release to the environment (P273), Dispose of contents/container to an approved waste disposal plant (P501).	

X-gal Solution (Part No. 40014): Three tubes – 1.5 mL

**Classification:**


Flammable Liquids, Category 3 (H226)

Acute toxicity, Inhalation, Category 4 (H332)

Acute toxicity, Dermal, Category 4 (H312)

Eye irritation, Category 2A (H319)

Reproductive toxicity, Category 1B (H360)

<b>Pictogram</b>	
<b>Signal Word</b>	Danger
<b>Hazard Statements:</b> Flammable liquid and vapor (H226), Harmful in contact with skin or if inhaled (H312 + H332), Causes serious eye irritation (H319), May damage fertility or the unborn child (H360).	
<b>Precautionary Statements:</b> Obtain special instructions before use (P201), Do not handle until all safety precautions have been read and understood (P202), Keep away from heat/sparks/open flames/hot surfaces. No smoking (P210).	

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

100X Fixing Solution (Part No. 40010): One tube – 1.5 mL

CHEMICAL NAME	CONCENTRATION	CAS #
Glutaraldehyde	25%	111-30-8

Staining Solution A (Part No. 40011): One tube – 1.5 mL

CHEMICAL NAME	CONCENTRATION	CAS #
Potassium Ferrocyanide	500 mM	14459-95-1

X-gal Solution (Part No. 40014): Three tubes – 1.5 mL

CHEMICAL NAME	CONCENTRATION	CAS #
Dimethyl Formamide	100%	117880-10-1

### SECTION 4. FIRST-AID MEASURES

- IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
- IN CASE OF SKIN CONTACT, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. CALL A PHYSICIAN.

- IN CASE OF CONTACT WITH EYES, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. ASSURE ADEQUATE FLUSHING BY SEPARATING THE EYELIDS WITH FINGERS. CALL A PHYSICIAN.

#### **SECTION 5. FIRE-FIGHTING MEASURES**

- Suitable extinguishing media: Water spray, alcohol-resistant foam, dry chemical or CO<sub>2</sub>
- Special protective equipment: Self-contained breathing apparatus

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Evacuate area
- Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves.
- Absorb with sand or vermiculite, sweep up, place in a bag and hold for waste disposal.
- Avoid raising dust.
- Ventilate area and wash spill site after material pickup is complete.

#### **SECTION 7. SAFETY HANDLING AND STORAGE**

- Should be handled by trained personnel observing good laboratory practices.
- Avoid breathing vapor.
- Avoid skin contact or swallowing.
- May cause allergic reaction in sensitized individuals.
- Store in properly labeled containers at temperature on label

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

- Engineering measures: Handle in accordance with good industrial hygiene and safety practices. Wash hands immediately after handling the product.
- Personal protective equipment: Face shield or safety glasses, gloves, protective clothing, suitable respiratory equipment in cases of inadequate ventilation.

#### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

- Form: liquid
- Odor: no data available
- pH: no data available
- Boiling point / range: no data available
- Melting point / range: no data available
- Flash point: no data available
- Evaporation rate: no data available
- Vapor pressure: no data available
- Vapor density: no data available
- Relative density: no data available
- Water solubility: no data available
- Autoignition temperature: no data available
- Decomposition temperature: no data available
- Viscosity: no data available

- Explosive properties: no data available
- Oxidizing properties: no data available

#### **SECTION 10. STABILITY AND REACTIVITY**

- Stability: no data available
- Reactivity: no data available
- Conditions to avoid: no data available
- Incompatible materials: no data available
- Decomposition products: no data available

#### **SECTION 11. TOXICOLOGICAL INFORMATION**

- Acute toxicity
  - Potassium Ferrocyanide: LD50 Oral 3.613 mg/kg (rat)
  - All other hazardous components: no data available
- Skin corrosion/irritation
  - Potassium Ferrocyanide: No skin irritation (rabbit)
  - All other hazardous components: no data available
- Serious eye damage/irritation
  - Potassium Ferrocyanide: Mild eye irritation (rabbit)
  - All other hazardous components: no data available
- Respiratory or skin sensitization
  - Glutaraldehyde: May cause allergic respiratory reaction, may cause allergic skin reaction.
  - Potassium Ferrocyanide: Did not cause sensitization on laboratory animals (guinea pig)
  - All other hazardous components: no data available
- Germ cell mutagenicity: no data available
- Carcinogenicity: no data available
- Reproductive toxicity: no data available

#### **SECTION 12. ECOLOGICAL INFORMATION**

- Ecotoxicity
  - Potassium Ferrocyanide: no data available, Toxicity to Daphnia and other aquatic invertebrates: EC50 32 mg/l 48h (Daphnia)
  - All other hazardous components: no data available
- Mobility: no data available
- Biodegradation
  - Potassium Ferrocyanide: no readily biodegradable
  - All other hazardous components: no data available
- Bioaccumulation: no data available

#### **SECTION 13. DISPOSAL CONSIDERATIONS**

For small quantities: Cautiously add to a large stirred excess of water. Adjust the pH to neutral. Flush the aqueous solutions down the drain with plenty of water.

#### **SECTION 14. TRANSPORT INFORMATION - IATA**

- Hazard Class: 8
- Subsidiary Class: none
- Packing Group: II
- UN-No: UN3265
  
- Hazard Class: 3
- Subsidiary Class: none
- Packing Group: III
- UN-No: UN2265

NOTE: THIS PRODUCT IS SHIPPED AS "DANGEROUS GOODS IN EXCEPTED QUANTITIES" UNDER IATA REGULATION 2.6.2.2.

#### **SECTION 15. REGULATORY INFORMATION**

- Safety, health and environmental regulations/legislation specific for the substance or mixture: no data available
- Chemical safety assessment: no data available

#### **SECTION 16. OTHER INFORMATION**

The above information is believed to be correct but does not purport to be all inclusive and should be used only as a guide for experienced personnel. Cell Biolabs, Inc. shall not be held liable for any damage resulting from the handling or from contact with the above product(s).

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