



# SibEnzyme Ltd.

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## **MATERIAL SAFETY DATA SHEET**

(The format of the MSDS complies with Commission Directive 2001/58/EC as amended.)

Revised: 01 December 2017

### **1. IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY**

**Product Name:**

GLAD-PCR assay Kit

**Catalogue number of the product:**

K009S, K009L (depending on the amount of ingredients)

**Use of the product:**

For laboratory use

**Application:**

Study of DNA methylation.

Determination of R(5mC)GY site in the point of interest in human DNA.

**Company identification:**

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**Emergency telephone number:**

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### **2. COMPOSITION/ INFORMATION ON INGREDIENTS**

**The kit K009S includes:**

1. 1x TE Buffer - 200 µL,
2. 10x SE TMN Buffer - 150 µL,
3. DMSO - 35 µL,
4. BSA, 10 mg/mL - 70 µL,
5. GluI (20 u.a./µL) - 10 µL,
6. Universal adapter, double-stranded (10 µM) - 110 µL,

7. ATP, 10 mM - 110  $\mu$ L,
8. DNA ligase T4 (200 u.a./ $\mu$ L) - 100  $\mu$ L,
9. 10X SE GLAD Buffer - 430  $\mu$ L,
10. MgCl<sub>2</sub>, 50 mM - 120  $\mu$ L,
11. dNTP Mix, 10 mM each - 90  $\mu$ L,
12. SP Taq DNA Polymerase, 5 u.a./ $\mu$ L - 40  $\mu$ L,
13. Control DNA Raji, 18 ng/ $\mu$ L - 10  $\mu$ L,
14. Control DNA HeLa, 18 ng/ $\mu$ L - 10  $\mu$ L,
15. Control DNA Lambda, 18 ng/ $\mu$ L - 25  $\mu$ L,
16. Control URB1 mix (oligonucleotide primers + TaqMan probe, 10  $\mu$ M each) - 40  $\mu$ L,
17. Control CEBPD mix (oligonucleotide primers + TaqMan probe, 10  $\mu$ M each) - 15  $\mu$ L
18. Primers and TaqMan probes (upon request).

**The kit K009L includes:**

1. 1x TE Buffer - 1 mL,
2. 10x SE TMN Buffer - 750  $\mu$ L,
3. DMSO - 175  $\mu$ L,
4. BSA, 10 mg/mL - 350  $\mu$ L,
5. GluI (20 u.a./ $\mu$ L) - 35  $\mu$ L,
6. Universal adapter, double-stranded (10  $\mu$ M) - 550  $\mu$ L,
7. ATP, 10 mM - 550  $\mu$ L,
8. DNA ligase T4 (200 u.a./ $\mu$ L) - 450  $\mu$ L,
9. 10X SE GLAD Buffer - 2200  $\mu$ L,
10. MgCl<sub>2</sub>, 50 mM - 600  $\mu$ L,
11. dNTP Mix, 10 mM each - 450  $\mu$ L,
12. SP Taq DNA Polymerase, 5 u.a./ $\mu$ L - 200  $\mu$ L,
13. Control DNA Raji, 18 ng/ $\mu$ L - 50  $\mu$ L,
14. Control DNA HeLa, 18 ng/ $\mu$ L - 50  $\mu$ L,
15. Control DNA Lambda, 18 ng/ $\mu$ L - 125  $\mu$ L,
16. Control URB1 mix (oligonucleotide primers + TaqMan probe, 10  $\mu$ M each) - 40  $\mu$ L,
17. Control CEBPD mix (oligonucleotide primers + TaqMan probe, 10  $\mu$ M each) - 15  $\mu$ L
18. Primers and TaqMan probes (upon request).

Ingredients indicated above do not present a health or environmental hazard within the meaning of Council Directive 67/548/EEC (and Commission Directive 2008/58/EC), or their concentrations do not exceed the limits specified in Council Directive 1999/45/EC, and in Commission Directive 2001/58/EC.

<b>3. HAZARDS IDENTIFICATION</b>
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The product is not classified as dangerous according to Directive 1999/45/EC or Directive 67/548/EC, and is not labelled with danger symbols or indications of danger. (The same is in the Commission Directive 2008/58/EC of 21 August 2008).

**Hazards deriving from physical-chemical properties:**

The data available do not support any physical or chemical hazard.

**Human health hazards:**

Inappropriate handling may cause formation of aerosols. Inhalation of aerosols may cause allergic type reactions in sensitized individuals. Prolonged skin contact may cause minor irritation.

**Caution:** Avoid inhalation, ingestion, and skin contacts.

**Environmental hazards:**

The data available do not support any environmental hazard.

**4. FIRST-AID MEASURES****Ingestion:**

If swallowed, rinse mouth and throat thoroughly with water. Consult a doctor in event of any complaints.

**Inhalation:**

If inhaled, remove victim from area of exposure. If symptoms of irritation or respiratory allergy occur, consult a doctor.

**Skin contact:**

Generally, the product does not irritate the skin. If symptoms of irritation after prolonged exposure occur, consult a doctor.

**Eye contact:**

In case of contact, wash out opened eyes with plenty of water for several minutes. Consult a doctor in event of any complaints.

**5. FIRE-FIGHTING MEASURES**

The product cannot cause fire.

**Suitable extinguishing agents:**

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

**Not suitable extinguishing agents:**

None.

**Special exposure hazards from decomposition products:**

Not thoroughly investigated.

**Protective equipment:**

Wear self-contained breathing apparatus and protective clothing.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions:**

Wear appropriate gloves (see Section 8), safety glasses to clean small releases/spillage. In case of vapour/aerosol formation, wear suitable respiratory protection means. Ventilate the area.

**Environmental precautions:**

No special measures required.

**Methods for cleaning up:**

Absorb spillages with liquid-binding material. Ventilate and wash the area after the spillage is completely removed.

**Additional information:**

No dangerous substances are released.

**7. HANDLING AND STORAGE****Handling:**

No further requirements.

Use appropriate personal protection measures (see Section 8). Avoid any contact with the liquid. Avoid the formation of aerosols. Ventilate area.

**Storage:**

Store at - 20°C.

None other specific requirements relating to the product.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Ingredients with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that need to be monitored at the workplace.

**General protective and hygienic measures:**

The usual precautionary measures are the same as for chemicals handling.

**Engineering measures:**

None specific requirements relating to the product.

**Personal protection:**

- **Respiratory protection:** No special measures required.
- **Hand protection:** Wear rubber gloves. None special requirements to rubber.
- **Eye protection:** No need to wear glasses (goggles) when ordinary operations with the product. Safety glasses are recommended during certain operations when aerosol formation is possible.
- **Skin protection:** The usual precautionary measures accepted in research laboratories, e.g. protective clothes (gowns). None specific requirements.
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**9. PHYSICAL AND CHEMICAL PROPERTIES****For all components of the kit:**

**Appearance:** Liquid.

**Colour:** Colourless (excepting Control URB1 mix and Control CEBPD mix – pink).

**Odour:** Odourless.

**Flash Point:** Not applicable.

**Flammability/autoflammability:** The product is not flammable/self-igniting.

**Explosive properties:** The product does not possess explosive properties.

**Oxidizing properties:** Not applicable.

**Vapour pressure:** Not applicable.

**Vapour density:** Not applicable.

**Evaporation rate:** Not applicable.

**Conductivity:** Not applicable.

## 10. STABILITY AND REACTIVITY

### **Stability:**

Stable under storage conditions (see Section 7). Storage at room temperature may result in lowering of the specific activity, but not result in any hazardous reactions.

### **Conditions to avoid:**

No conditions which may cause dangerous reactions.

### **Possibility of hazardous reactions:**

No dangerous reactions known.

### **Materials to avoid:**

No materials which may cause dangerous reactions.

### **Hazardous decomposition products:**

No dangerous decomposition products known.

### **Hazardous polymerization:**

Will not occur.

## 11. TOXICOLOGICAL INFORMATION

### **Routes of exposure:**

**Inhalation:** Inhalation of aerosols may cause allergic type reactions in sensitized individuals.

**Ingestion:** Repeated ingestion or excessive dosage may cause irritation of the gastrointestinal tract.

**Skin and eye contact:** Generally, the product does not irritate the skin and eyes. Prolonged skin or eye contact may cause minor irritation.

### **Additional toxicological information:**

When used and handled according to specifications, the product does not have any harmful effects.

The product is not listed in a priority list (as foreseen under Council Regulation (EEC) No 793/93 on the evaluation and control of the risks of the existing substances.).

## 12. ECOLOGICAL INFORMATION

### **Ecotoxicity:**

The product is considered not dangerous to the environment with respect to mobility, persistence and degradability, bioaccumulation, aquatic toxicity and other data relating to ecotoxicity.

### **Persistence and degradability:**

The product is readily biodegradable.

### **Bioaccumulative potential:**

It is considered that the product does not accumulate in biota, and does not pass through the food chain.

**Other adverse effects:**

Not applicable.

**13. DISPOSAL CONSIDERATIONS**

The disposal of the product does not present a danger.

No special disposal methods required, except to be in accordance with current local environmental regulations.

**14. TRANSPORT INFORMATION**

**Special precautions:**

None known.

**Proper shipping name:**

Not dangerous goods according to transport regulations.

**National transport regulations:**

No additional national transport regulations are known to the supplier.

<b>IMDG:</b> Non-hazardous for sea freight.
<b>ADR:</b> Non-hazardous for road transport.
<b>RID:</b> Non-hazardous for rail transport.
<b>ICAO/IATA:</b> Non-hazardous for air transport.

**Other information:**

The product has to be stored in ice during the transportation not to lose its specific properties.

**15. REGULATORY INFORMATION**

**US**

**Labelling according to US Regulations:** Caution: Avoid contact and inhalation.

**US Regulatory information:** SARA LISTED: No.

**EU**

**Labelling according to EU Guidelines:** The product is not dangerous within the meaning of Directives 67/548/EC, 1999/45/EC, and 88/379/ECC, and is not labelled with danger symbols or indications of danger.

**Canada**

**WHMIS classification:** This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

**DSL:** No.

**NDSL:** No.

**Export and Import of Dangerous Chemicals (Regulation (EC) No 689/2008) Information:**

This substance is not listed in the Annex I of Regulation (EC) No 689/2008.

## **16. OTHER INFORMATION**

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. SibEnzyme shall not be held liable for any damage resulting from handling or from contact with the above product.