



**FSL-GB3(GALa4GALb4GLCb)-SA1-L1 #352439,**  
**FSL-GB4(GALNb3GALa4GALb4GLCb)-SA1-L1 #828995**  
**FSL-GALILI(GALa3GALb4GLCNb)-SA1-L1 #869960**

**IMPORTANT NOTICE** This Material Safety Data Sheet (MSDS) is prepared by KODE Biotech Materials Limited in accordance with the New Zealand Occupational Safety & Health Service, Department of Labour Guidelines for the Preparation of Material Safety Data Sheets in New Zealand. The information contained herein must not be altered or deleted. Additional information may be appended to the MSDS, but it must be marked clearly to indicate that it is not part of the original.

## 1. COMPANY DETAILS

**Supplier Name:** KODE Biotech Materials Limited CN #2153669  
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## IDENTIFICATION

## 2. IDENTIFICATION OF THE MATERIAL

**Product Names:** FSL-GB3(GALa4GALb4GLCb)-SA1-L1;  
FSL-GB4(GALNb3GALa4GALb4GLCb)-SA1-L1;  
FSL-GALILI(GALa3GALb4GLCNb)-SA1-L1

**Other Names:** 614365 (cat # obsolete)

**Manufacturer's Product Code:** 352439 FSL-GB3(GALa4GALb4GLCb)-SA1-L1;  
828995 FSL-GB4(GALNb3GALa4GALb4GLCb)-SA1-L1;  
869960 FSL-GALILI(GALa3GALb4GLCNb)-SA1-L1

**United Nations Number:** None allocated

**Dangerous Good Class:** None allocated

**Hazchem Code:** None allocated

**Toxic Substances Schedule:** Not listed

**Uses:** To modify the surface of cells, liposomes or virions.  
For *in vitro* diagnostic and research use only

### 3. PHYSICAL DESCRIPTION/PROPERTIES

<b>Appearance:</b>	White or pale yellow , non crystalline, lyophilised powder
<b>Odour:</b>	Odourless
<b>Boiling Point/Melting Point:</b>	Not determined
<b>Specific Gravity:</b>	Not determined
<b>Vapour Pressure:</b>	Negligible
<b>Flashpoint:</b>	Not determined
<b>Flammability Limits:</b>	Not determined
<b>Solubility in Water:</b>	High – disperses as a clear solution
<b>Reactivity:</b>	None known
<b>Incompatibility (materials to avoid):</b>	Strong acidic or basic reagents, oxidants, unstable in water
<b>Hazardous Decomposition or By-products:</b>	Not determined
<b>Hazardous polymerisation:</b>	Will not occur

### 4. COMPOSITION/INFORMATION ON INGREDIENTS

**General Description:** Substance consists of saccharides linked to a lipid tail (L- $\alpha$ -phosphatidylethanolamine dioleoyl). Molecular weights are reported as sodium salts.

<i>Name:</i>	MW	CAS number	Brutto formula	Proportion
FSL-GB3(GALa4GALb4GLCb)-SA1-L1	1437.69	1075699-41-0	C <sub>68</sub> H <sub>122</sub> N <sub>2</sub> NaO <sub>26</sub> P	100%
FSL-GB4(GALNb3GALa4GALb4GLCb)-SA1-L1	1597.88		C <sub>75</sub> H <sub>134</sub> N <sub>2</sub> NaO <sub>30</sub> P	100%
FSL-GALILI(GALa3GALb4GLCNb)-SA1-L1	1476.77		C <sub>71</sub> H <sub>127</sub> N <sub>3</sub> NaO <sub>25</sub> P	100%

Note: CAS numbers relate to the “free form”, i.e. the acid, not the salt, of each construct.

## HEALTH HAZARD INFORMATION

### 5. HEALTH EFFECTS

- Routes of Entry:** May enter the body through ingestion, skin and eye contact. If accidentally exposed any symptoms or untoward health effects are unlikely.
- Toxicity:** We are not aware of any toxicity for this product. These constructs and analogues have been intravenously injected into experimental animals and no adverse consequences have been observed.
- Health Hazard:** We are not aware of any reported or unreported health hazards for this product
- Carcinogenicity:** Not listed
- Signs/Symptoms of Exposure:** Unknown
- Medical Conditions Generally Aggravated by Exposure:** Unknown
- Potential Health Hazard:** Substances may not be used as drugs, cosmetics, food additives or household chemicals. For Laboratory Diagnostic or Research Use Only
- Chronic:** None known or expected

### 6. FIRST AID MEASURES

- Eye:** Flush with water for at least 15 minutes. If symptoms arise seek medical attention.
- Swallowed:** DO NOT INDUCE VOMITING. Wash out mouth with water and give water to drink. If symptoms arise seek medical attention.
- Skin:** Remove contaminated clothing. Wash affected area with soap and water for at least 15 minutes. If symptoms arise seek medical attention.
- Inhaled:** Remove to fresh air. Give oxygen if breathing is difficult and seek medical attention.
- First Aid Facilities:** Ensure water is available at point of use.
- Advice To Doctor:** Treat symptomatically. There is no known or expected toxicity for these substances.

## PRECAUTIONS FOR USE

### 7. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Exposure Standards:** No exposure limits set
- Engineering Controls:** None under normal operating conditions
- Personal Protection:** Wear protective gloves and safety glasses when handling this product. Do not pipette by mouth.
- Precautions for Safe Handling and Use/ Control Measures:** Ventilation – not necessary  
No special precautions required  
Clean up spills with soap and water

**Flammability:** Combustible

## SAFE HANDLING INFORMATION

### 8. STORAGE AND TRANSPORT

- Classification:** Not classified as a dangerous good  
Store powder below minus 10 degrees C (protected from light).  
Opened product must be stored in a desiccator below minus 10 degrees C.
- Storage:** Product reconstituted in saline/PBS should be kept sterile and stored for no longer than 1 month at 4 degrees C. Stored solutions should be sonicated for 60 seconds before re-use.  
Product reconstituted in water can be stored for no longer than 1 day at 4 degrees C.
- Transport:** Transport below 25 degrees C. Can be held at 4 degrees C for up to one month in temporary storage.
- Stability:** Unopened vials are expected to be stable as powder for 2 years at below minus 10 degrees C.  
Opened vials are expected to be stable as powder for >12 months if stored dry (desiccated) and at below minus 10 degrees C.  
Reconstituted solutions (2 mg/ml) are expected to be stable for 24 months if stored at below minus 10 degrees C.  
Product reconstituted in water is unstable  
Stability data is not yet available for storage of reconstituted product in frozen state.
- Subsidiary Risk:** None allocated
- Packing Group:** None allocated
- Hazchem Code:** None allocated

### 9. SPILLS AND DISPOSAL

- Minor Spills:**
- Wear protective gloves and safety glasses.
  - Soak up spills with absorbent material i.e. paper towels or vermiculite.
  - Place spilled material in clean, dry, sealed container for disposal.
  - Decontaminate area with 1% sodium hypochlorite in water.
- Major Spills:**
- Wear protective gloves and safety glasses.
  - Contain and absorb spills using earth, sand or inert absorbent.
  - Prevent material entering open drains and waterways.
  - Collect residues and seal in labelled drums for disposal.
  - Decontaminate area with 1% sodium hypochlorite in water.
- Disposal:** In accordance with state land and waste management authority. For good environmental practice avoid discharge to waterways.

## 10. FIRE/EXPLOSION HAZARD

**Fire/Explosion Hazard** Combustible, not explosive

## 11. ECOLOGICAL INFORMATION AND DISPOSAL CONSIDERATIONS

**Ecotoxicity:** None known. Unlikely to be harmful to the environment.

**Environmental Fate:** Degraded by micro-organisms

## 12. REGULATORY INFORMATION

**Poisons Schedule Number:** Not scheduled

**Dangerous Good Class:** None allocated

**Subsidiary Risk:** None allocated

**Packing Group:** None allocated

**Hazchem Code:** None allocated

## 13. CONTACT POINT

**Further Information:** Call +64 9 921 9708 or +64 9 921 9710 during working hours or +64 21 71 5494 after hours

**Website Information:** Further information is available at [www.KODEBiotech.com](http://www.KODEBiotech.com)

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## 14. DOCUMENT CONTROL

**Document number:** MSDS300204

**Date of Issue:** 26 September 2008

**Last Revised:** 20 January 2010

**Reason for Revision:** 20 January 2010 – update brutto formula and molecule weights, new catalogue number for FSL-Galili

22 December 2009, revised catalogue numbers for FSL's, update stability

17 March 2009 – update storage conditions