Ligation Sequencing Kit
SQK-LSK109
Date: 25/04/2018

SAFETY DATA SHEET
SAFETY DATA SHEET
SQK-LSK109 – Ligation Sequencing Kit

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Product name SQK-LSK109 – Ligation Sequencing Kit

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses Laboratory reagent.
Uses advised against No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet
Supplier Oxford Nanopore Technologies Ltd.
Gosling Building,
Edmund Halley Road,
Oxford Science Park,
Oxford,
OX4 4DQ,
UK
T: +44 (0) 845 034 7900
F: +44 (0) 845 034 7901
E: support@nanoporetech.com

1.4. Emergency telephone number
Emergency telephone +44 (0) 845 034 7900 (Mon - Fri 09:00 - 17:00)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification (EC 1272/2008)
Physical hazards Not Classified
Health hazards Not Classified
Environmental hazards Not Classified

2.2. Label elements
Important Notes This product is considered to be a small package and is labelled according to the relevant provisions of the legislation.

Hazard statements NC Not Classified
Precautionary statements P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Supplemental label information EUH210 Safety data sheet available on request.

2.3. Other hazards
This product does not contain any substances classified as PBT or vPvB.
**SECTION 3: Composition/information on ingredients**

### 3.2. Mixtures

<table>
<thead>
<tr>
<th>Substance</th>
<th>Concentration (%)</th>
<th>CAS number</th>
<th>EC number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol</td>
<td>&lt; 50%</td>
<td>56-81-5</td>
<td>200-289-5</td>
</tr>
</tbody>
</table>

Substance with National workplace exposure limits.

**Classification**

Not Classified

The full text for all hazard statements is displayed in Section 16.

**Composition comments**

This kit contains the following components:
- Lambda DNA 88μl
- Calibrant Strand 50μL
- Adapter Mix 40μL
- Ligation Buffer 200μL
- L Fragment Buffer 1.8 mL
- S Fragment Buffer 1.8 mL
- Elution Buffer I 200μL
- Sequencing Buffer 300μL
- Loading Beads 360μl
- Sequencing Tether 10μl

**SECTION 4: First aid measures**

### 4.1. Description of first aid measures

**General information**

None of the components are considered to be a significant hazard due to their small quantity. Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.

**Inhalation**

Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.

**Ingestion**

Rinse mouth thoroughly with water. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Give a few small glasses of water or milk to drink. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person.

**Skin contact**

Remove affected person from source of contamination. Rinse immediately with plenty of water.

**Eye contact**

Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 10 minutes.

**Protection of first aiders**

First aid personnel should wear appropriate protective equipment during any rescue.

### 4.2. Most important symptoms and effects, both acute and delayed

**General information**

None of the components are considered to be a significant hazard due to their small quantity. See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

**Inhalation**

Prolonged inhalation of high concentrations may damage respiratory system.

**Ingestion**

Gastrointestinal symptoms, including upset stomach.

**Skin contact**

Prolonged contact may cause dryness of the skin.
SQK-LSK109 – Ligation Sequencing Kit

**Eye contact**
May cause temporary eye irritation.

4.3. **Indication of any immediate medical attention and special treatment needed**

**Notes for the doctor**
Treat symptomatically.

**Specific treatments**
No special treatment required.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

**Suitable extinguishing media**
The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

**Unsuitable extinguishing media**
Do not use water jet as an extinguisher, as this will spread the fire.

#### 5.2. Special hazards arising from the substance or mixture

**Specific hazards**
None of the components are considered to be a significant hazard due to their small quantity. Containers can burst violently or explode when heated, due to excessive pressure build-up.

**Hazardous combustion products**
Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.

#### 5.3. Advice for firefighters

**Protective actions during firefighting**
Avoid breathing fire gases or vapours. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak.

**Special protective equipment for firefighters**
Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions**
Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage.

**Environmental precautions**
Avoid discharge to the aquatic environment.

#### 6.2. Methods and material for containment and cleaning up

**Methods for cleaning up**
For all components:
Wear protective clothing as described in Section 8 of this safety data sheet. Reuse or recycle products wherever possible. Wipe up with an absorbent cloth and dispose of waste safely. The contaminated absorbent may pose the same hazard as the spilled material. Flush contaminated area with plenty of water. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Wash thoroughly after dealing with a spillage.

#### 6.4. Reference to other sections

**Reference to other sections**
For personal protection, see Section 8. For waste disposal, see Section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling
SQK-LSK109 – Ligation Sequencing Kit

Usage precautions
Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use.

Advice on general occupational hygiene
Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

7.2. Conditions for safe storage, including any incompatibilities
Storage precautions
Store away from incompatible materials (see Section 10). Store in accordance with local regulations. Protect from sunlight. Store at temperatures not exceeding 4°C.

Storage class
Unspecified storage.

7.3. Specific end use(s)
Specific end use(s)
The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters
Occupational exposure limits
Glycerol
Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ mist
WEL = Workplace Exposure Limit

8.2. Exposure controls
Protective equipment
Appropriate engineering controls
Provide adequate ventilation. Good general ventilation should be adequate to control worker exposure to airborne contaminants.

Eye/face protection
Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. The following protection should be worn: Chemical splash goggles.

Hand protection
Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

Other skin and body protection
Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

Hygiene measures
Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke.

4/9
SQK-LSK109 – Ligation Sequencing Kit

Respiratory protection

Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Provide adequate ventilation. Large Spillages: If ventilation is inadequate, suitable respiratory protection must be worn.

Environmental exposure controls

Not regarded as dangerous for the environment.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Product comments

This product is a kit consisting of a series of vials. All of the components have the following physical properties:

Appearance

Liquid.

Colour

Colourless.

Odour

Odourless.

Odour threshold

Not available.

pH

Not available.

Melting point

~0°C @ 760 mm Hg

Initial boiling point and range

~100°C @ 760 mm Hg

Flash point

Not available.

Evaporation rate

Not available.

Upper/lower flammability or explosive limits

Not available.

Vapour pressure

Not available.

Vapour density

Not available.

Relative density

Not available.

Solubility(ies)

Soluble in water.

Partition coefficient

Not available.

Auto-ignition temperature

Not available.

Decomposition Temperature

Not available.

Viscosity

Not applicable.

Explosive properties

Not considered to be explosive.

Oxidising properties

Does not meet the criteria for classification as oxidising.

9.2. Other information

No information required.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity

See the other subsections of this section for further details.

10.2. Chemical stability

Stability

Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
10.3. Possibility of hazardous reactions

Possibility of hazardous reactions
No potentially hazardous reactions known.

10.4. Conditions to avoid

Conditions to avoid
Avoid heat. Protect from sunlight.

10.5. Incompatible materials

Materials to avoid
No specific material or group of materials is likely to react with the product to produce a hazardous situation.

10.6. Hazardous decomposition products

Hazardous decomposition products
Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects
None of the components of this kit are regarded as a health hazard under current legislation.

Acute toxicity - oral
Notes (oral LD₅₀)
Based on available data the classification criteria are not met.

Acute toxicity - dermal
Notes (dermal LD₅₀)
Based on available data the classification criteria are not met.

Acute toxicity - inhalation
Notes (inhalation LC₅₀)
Based on available data the classification criteria are not met.

Skin corrosion/irritation
Animal data
Based on available data the classification criteria are not met.

Serious eye damage/irritation
Based on available data the classification criteria are not met.

Respiratory sensitisation
Based on available data the classification criteria are not met.

Skin sensitisation
Based on available data the classification criteria are not met.

Germ cell mutagenicity
Genotoxicity - in vitro
Based on available data the classification criteria are not met.

Carcinogenicity
Based on available data the classification criteria are not met.

IARC carcinogenicity
None of the ingredients are listed or exempt.

Reproductive toxicity
Reproductive toxicity - fertility
Based on available data the classification criteria are not met.

Reproductive toxicity - development
Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure
STOT - single exposure
Not classified as a specific target organ toxicant after a single exposure.
### SQK-LSK109 – Ligation Sequencing Kit

<table>
<thead>
<tr>
<th>STOT - repeated exposure</th>
<th>Not classified as a specific target organ toxicant after repeated exposure.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspiration hazard</td>
<td>Based on available data the classification criteria are not met.</td>
</tr>
<tr>
<td>General information</td>
<td>No specific health hazards known. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Prolonged inhalation of high concentrations may damage respiratory system.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>Gastrointestinal symptoms, including upset stomach.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>Prolonged contact may cause dryness of the skin.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>May cause temporary eye irritation.</td>
</tr>
<tr>
<td>Route of exposure</td>
<td>Ingestion Inhalation Skin and/or eye contact</td>
</tr>
<tr>
<td>Target organs</td>
<td>No specific target organs known.</td>
</tr>
</tbody>
</table>

### SECTION 12: Ecological Information

#### Ecotoxicity
None of the components are considered to be a significant hazard due to their small quantity.

#### 12.1. Toxicity
Based on available data the classification criteria are not met.

#### 12.2. Persistence and degradability
The degradability of the product is not known.

#### 12.3. Bioaccumulative potential
Bioaccumulative potential: No data available on bioaccumulation.
Partition coefficient: Not available.

#### 12.4. Mobility In soil
Mobility: The product is water-soluble and may spread in water systems.

#### 12.5. Results of PBT and vPvB assessment
This product does not contain any substances classified as PBT or vPvB.

#### 12.6. Other adverse effects
None known.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods
The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.
SQK-LSK109 – Ligation Sequencing Kit

Disposal methods
Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste packaging should be collected for reuse or recycling. Incineration or landfill should only be considered when recycling is not feasible. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of the local water authority.

SECTION 14: Transport information

General
The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number
Not applicable.

14.2. UN proper shipping name
Not applicable.

14.3. Transport hazard class(es)
No transport warning sign required.

14.4. Packing group
Not applicable.

14.5. Environmental hazards
Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user
Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
National regulations
Health and Safety at Work etc. Act 1974 (as amended).
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].
EH40/2005 Workplace exposure limits.

EU legislation

15.2. Chemical safety assessment
No chemical safety assessment has been carried out.

SECTION 16: Other information
SQK-LSK109 – Ligation Sequencing Kit

**Abbreviations and acronyms used in the safety data sheet**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
IATA: International Air Transport Association.
IMDG: International Maritime Dangerous Goods.
CAS: Chemical Abstracts Service.
ATE: Acute Toxicity Estimate.
LC₅₀: Lethal Concentration to 50 % of a test population.
LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
EC₅₀: 50% of maximal Effective Concentration.
PBT: Persistent, Bioaccumulative and Toxic substance.
vPvB: Very Persistent and Very Bioaccumulative.

**General Information**

This product is considered to be a small package and is labelled according to the relevant provisions of the legislation.

**Key literature references and sources for data**


**Training advice**

Read and follow manufacturer's recommendations. Only trained personnel should use this material.

**Revision comments**

This is the first issue.

**Revision date**

25/04/2018

**SDS number**

7462

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.