



Material Safety Data Sheet

Version 12.15.11

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : *IGH Break Apart DNA-FISH Probe*

Catalog number : 13-014

Manufacturer : **Cancer Genetics Italia S.r.l.**

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2. COMPOSITION/INFORMATION ON INGREDIENTS

| Component | CAS# | Range % by weight |
|--------------------------|----------------|-------------------|
| DNA; proprietary mixture | not applicable | 5-10 |
| Placental DNA | 9007-49-2 | 10-15 |
| Formamide | 75-12-7 | 37-42 |
| Dextran sulfate | 9011-18-1 | 5-10 |
| Sodium Chloride | 7647-14-5 | 5-10 |
| Sodium Citrate | 6132-04-3 | 1-6 |
| Sodium Dodecyl Sulfate | 151-21-3 | 0.01-0.05 |
| Water | 7732-18-5 | 25-30 |

3. HAZARDS IDENTIFICATION

Emergency overview: May cause respiratory tract, digestive tract, severe eye and skin irritation. Can cause damage on central nervous system, kidney, liver and blood.

Potential health effects:

Eye contact: May cause eye irritation.

Skin contact: May cause skin irritation. May be harmful if absorbed through the skin.

Inhalation: May cause respiratory tract irritation.

Ingestion: May cause gastrointestinal irritation with nausea. Ingestion in large amounts may cause an increase in blood pressure.

4. FIRST AID MEASURES

Eyes: Flush eyes with plenty of water for at least 15 minutes. Get medical aid.

Skin: Wash off with soap and plenty of water while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

Inhalation: Remove from exposure and move to fresh air.

Ingestion: Never give anything by mouth to an unconscious person. Get medical aid. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. Induce vomiting.

5. FIRE FIGHTING MEASURES

Flashpoint: Not determined.

Autoignition temperature: Not determined.

Extinguishing media: Use medium most appropriate to extinguish the fire. Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam.

Fire-fighting equipment: Wear a self-contained breathing apparatus in pressure-demand and full protective gear.

Unusual fire and explosion hazards: Not determined.

Hazardous combustion products: Not determined.

Flammability classification: None.

6. ACCIDENTAL RELEASE MEASURES

General information: Use proper personal protective equipment.

Spills/Leak: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in a suitable container. Clean up spills immediately.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin, and clothing. Keep container tightly close. Avoid ingestion and inhalation. Remove contaminated clothing and wash before reuse. Handle as if capable of transmitting infectious agents.

Storage: Store in a tightly closed container. Keep in original container. Store at -20°C and maintain in reduced light.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Personal Protective Equipment:

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate clothing to prevent skin exposure.

Exposure guidelines:

| Component | CAS# | Exposure limits |
|------------------|----------------|---|
| DNA mixture | Not applicable | Not determined |
| Placental DNA | 9007-49-2 | Not determined |
| Formamide | 75-12-7 | OSHA TWA 30 mg/m ³ OSHA STEL 45 mg/m ³ |
| Dextran sulfate | 9011-18-1 | None listed |
| Sodium Chloride | 7647-14-5 | None listed |
| Sodium Citrate | 6132-04-3 | None listed |

| | | |
|------------------------|-----------|-------------|
| Sodium Dodecyl Sulfate | 151-21-3 | None listed |
| Water | 7732-18-5 | None listed |

9. CHEMICAL AND PHYSICAL PROPERTIES

Physical State: Liquid.

Appearance: Clear.

Odor: Odorless.

pH: Not determined.

Vapor pressure: Not determined.

Vapor density: Not determined.

Boiling point: Not determined.

Melting point: Not determined.

Solubility in water: Not determined.

Specific gravity/density: Not determined.

Molecular Formula: Mixture.

Molecular Weight: Not available.

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under recommended storage conditions.

Conditions to avoid: Excess heat and light.

Materials to avoid: Acids, bases, oxidizing agents.

Hazardous decomposition: Chlorine, carbon monoxide, irritating fumes and gases, carbon dioxide, sodium oxide, nitrogen oxide.

Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity data:

Eye irritation: Not determined.

Skin irritation: Not determined.

Dermal LD50: Not determined.

Oral LD50: Not determined.

Inhalation LC50: Not determined.

Other toxicity data:

Testing has not been performed on this product. The information provided herein is based on available data from the ingredients and similar products.

Formamide

LD50 Oral, Rat- 5,577 mg/kg

LC50 Inhalation, Rat, 6 h- 3900ppm

LD50 Dermal, Rabbit- 17,000 mg/kg

Dextran Sulfate Sodium

LD50 Oral, Rat-20,600 mg/kg

SSC 20X

LD50 Oral, Mouse-4gm/kg

LC50 Inhalation, Rat->42 gm/kg

LD50 Dermal, Rabbit-> 10gm/kg

Epidemiology: No information found.

Teratogenicity: Formamide and Sodium Dodecyl Sulfate have a teratogenic effect.

Neurotoxicity: Formamide may target the central nervous system.

12. ECOLOGICAL INFORMATION

No information available.

13. DISPOSAL INFORMATION

Waste generators must consult national and local hazardous waste regulations to ensure complete and accurate classification.

14. TRANSPORT INFORMATION

Not subject to transport regulation.

15. REGULATORY INFORMATION

US regulatory information:

SARA 302: No components are reported under Section 302.

SARA 311: Acute and chronic health hazard.

SARA 312: No components are reported under Section 312.

SARA 313: No components are reported under Section 313.

OSHA hazards: Delayed target organ effects. Severe eye irritant. Teratogenic.

EU regulatory information:

R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.

R36/37/38: Irritating to eyes, respiratory system and skin.

R61: May cause harm to unborn child.

S24/25: Avoid contact with skin and eyes. In case of contact with the eyes, rinse immediately and seek for medical advice.

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

S45: In case of accident or if you feel unwell seek medical advice immediately (show the label where possible).

Canada regulatory information:

WHMIS: Some components of this product may have a toxic effect; class D-2A and D-2B.

16. OTHER INFORMATION

MSDS Creation Date: 05.10.10

The information above is believed to be accurate and represents the best information currently available. The data provided herein were received from sources outside the Company. Users should make their own investigations to determine the suitability of the information for their particular purposes and are responsible for the safe use of the product.