

Material Safety Data Sheet

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

 Product code:
 GM1113G

 Product name:
 TRANS *i* PORT Cells "NTCP (G)"

 Company name:
 Genomembrane Co., Ltd.

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Either frozen or growing cells shipped in liquid medium (mixture of components that may include, but is not limited: inorganic salts, vitamins, amino acids, carbohydrates and other nutrients dissolved in water). Frozen Cultures may also contain a 5%-20% solution of Dimethyl sulfoxide as a cryoprotectant.

This substance contains no ingredients at concentrations to be considered hazardous as defined by OSHA 29CFR 1910.1200 however this product should be handled according to good lab practices, with proper personal protective equipment, proper engineering controls and within the parameters of the purchaser's chemical hygiene plan.

3. HAZARDS IDENTIFICATION

GHS Classification: Cannot be classified

For Biosafety Level 2 Cell Cultures:

Handle as a potentially biohazardous material under at least Biosafety Level 2 containment. These cell lines are associated with human disease, hazards include: percutaneous injury, ingestion, mucous membrane exposure (U.S. Government Publication **Biosafety in Microbiological and Biomedical Laboratories)**. These cells have **NOT** been screened for adventitious agents. Universal Precautions according to 29 CFR 1910.1030 should be followed at all times when manipulating these cell lines.

4. FIRST AID MEASURES

Report to your Safety Office and Seek Medical Attention as Soon as Possible

Ingestion:	If person is unconscious seek emergency medical attention; never give anything by mouth to an unconscious person. If the person is conscious wash mouth out with copious amounts of water and call a physician. Do not induce vomiting unless directed to do so by a physician.
Inhalation:	If person is unconscious seek emergency medical attention, if person is conscious remove to fresh air and call a physician.
Dermal exposure:	Immediately wash skin with copious amounts of water followed by washing with soap and copious amounts of water. Remove all contaminated clothing.
Eye exposures:	Flush eyes with copious amounts of water for at least 15 minutes with eyelids separated and call a physician.
Notes to Physician:	Treat symptomatically and supportively.

5. FIRE-FIGHTING MEASURES

General:	Wear Self-Contained breathing apparatus in pressure demand, MSHA/NIOSH approved. During a fire, irritating and toxic gases may be generated by thermal decomposition.
Extinguishing Media:	Water spray, carbon dioxide, dry chemical powder, Halon (where regulations permit), or appropriate foam.
Autoignition Temperature:	N/A



Explosion limits:	N/A
Flash Point:	N/A

6. ACCIDENTAL RELEASE MEASURES

Use Personal Protective Equipment:

Including Chemical Splash Goggles, Chemical Resistant Gloves, and appropriate clothing to prevent skin exposure. In addition, a Respiratory protection program that complies with OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Methods for Cleaning Up

Patient/Victim:Wash with soap and water. Work clothes should be laundered separately. Launder
contaminated clothing before re-use. Do not take clothing home.

Equipment/Environment: Allow aerosols to settle; wearing protective clothing, gently cover spill with paper towel and apply 1% sodium hypochlorite, starting at perimeter and working towards the center; allow sufficient contact time before clean-up (30 min).

Note: The use of additional PPE may be necessary for cleaning solutions.

7. HANDLING AND STORAGE

Handle and store according to instructions on product information sheet and label.

Special Requirements:

Follow established laboratory procedures when handling material.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:	The use and storage of this material requires user to maintain and make available appropriate eyewash and safety shower facilities. Use fume hood or other appropriate ventilation method to keep airborne concentrations a low as possible.
Personal Protective Equipment:	Including Safety Glasses or goggles, Chemical Resistant Gloves, and appropriate clothing to prevent skin exposure. In addition, a Respiratory protection program that complies with OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions
Exposure Limits:	warrant respirator use. No exposure limits for this material have been established by ACGIH, NIOSH, or OSHA. There are no Vacated OSHA PEL for this material.

9. PHYSICAL AND CHAMICAL PROPERTIES

Physical state: Frozen

No Information is available for PH, Vapor Pressure, Vapor Density, Evaporation Rate, Viscosity, Boiling Point, Freezing/Melting Point, Decomposition Temperature, Solubility, Specific Gravity/Density, or Molecular Weight.

10. STABILITY AND REACTIVITY

Chemical Stability:
Conditions to Avoid:
Hazardous Decomposition Products:
Hazardous Polymerization:

Stable No information available. No information available. Will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicity Data: Effects of Long Term or Repeated Exposure: Chronic Exposure–Teratogen: Data not available Data not available Data not available



Chronic Exposure–Mutagen: Chronic Exposure–Reproductive Hazard:

Data not available Data not available

No Information was found in relation to: RTECS, LD50/LC50, Carcinogenicity, Epidemiology, Teratogenicity, Reproductive effects, Mutagenicity, or Neurotoxicology.

Note: The toxicological properties of this substance have not been fully investigated.

12. ECOLOGICAL INFORMATION

No ecological information available.

13. DISPOSAL CONSIDERATIONS

Hazardous waste generators are required to determine if a discarded chemical is classified as a hazardous waste according to 40 CFR Part 261.3. In addition waste generators must consult about and comply with all state and local regulations to ensure compliance.

14. TRANSPORT INFORMATION

Land Transport (ADR/RID): Inland Water ways transport (ADN): Sea Transport (IMDG): Air Transport (ICAQ-TP / IATA-DGR): DOT Classification: Not a dangerous good in sense of this transport regulation. Not a dangerous good in sense of this transport regulation. Not a dangerous good in sense of this transport regulation. Not a dangerous good in sense of this transport regulation Not a DOT controlled material (United States)

15. REGULATORY INFORMATION

This substance is not listed on the TSCA Inventory. It is for research and development use only. This substance is not SARA listed.

US Federal Regulations:	SARA 313: This product is not regulated by SARA CAA, Section 112, Hazardous Air
_	Pollutants (HAPs) (40 CFR 61): This product does not contain HAPs.

US State Regulations: California Proposition 65: This product does not contain chemicals listed under Proposition 65.

16. OTHER INFORMATION

This material is sold for research and development purposes only. It is not for any human or animal therapeutic or clinical diagnostic use. It is not intended for food, drug, household, agricultural, or cosmetic use. An individual technically qualified to handle potential hazardous chemicals must supervise the use of this material.

The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may be present unknown hazards and should be used with caution. Since GenoMembrane Co., Ltd. cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS MSDS DOES NOT CONSTITUTE A WARRANTY, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.