

# Material Safety Data Sheet

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## Section 1-Product Information

Product name	Protein Expression and Purification Kit
Product Cat. No.	L00208

## Section 2-Composition / Information on Ingredients

Substance/Preparation:	Preparation	Formula
Ingredient Name	CAS No.	
GST Resin	Not applicable	
Glutathione, reduced	70-18-8	C <sub>10</sub> H <sub>17</sub> N <sub>3</sub> O <sub>6</sub> S
Enterokinase	Not applicable	
Expression Vector	Not applicable	

## Section 3- Hazards Identification

Emergency Overview	
Caution	No known significant effects or critical hazards. Avoid prolonged contact with eyes, skin and clothing.
HMIS Rating	Not applicable.
Health	
Flammability	
Reactivity	
NFPA Rating	Not applicable.
Health	
Flammability	
Reactivity	

For additional information on toxicity, please refer to Section 11.

## Section 4- First Aid Measures

Oral Exposure	If swallowed, wash out mouth with water provided person is conscious. Call a physician.
Inhalation Exposure	If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.
Dermal Exposure	In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.
Eye Exposure	In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

## Section 5- Fire Fighting Measures

Flash Point	Not available
Autoignition Temp	Not available
Flammability	May be combustible at high temperature.
Extinguishing Media	
Suitable	Carbon dioxide, dry chemical powder, or appropriate foam. Water spray
Fire Fighting	
Protective Equipment	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s)	Emits toxic fumes under fire conditions.

## Section 6- Accidental Release Measures

Procedure to be Followed in Case of Leak or Spill	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Procedure(s) of Personal Precaution(s)	Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Methods for Cleaning up	Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

## Section 7-Handling and Storage

Handling	
User Exposure	Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.
Storage	
Suitable	Store empty columns at room temperature. Store High-Affinity GST Resin and Glutathione at 4°C, do not freeze. Store pGS-21a, rPorcine Enterokinase and 10X buffer at -20°C.

## Section 8-Exposure Controls/Personal Protection Equipment

Engineering Controls	No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
Personal Protective equipment	
Respiratory	Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) respirator.
Other	Wear a fitted, air-purifying or air-fed respirator, chemical-resistant gloves, safety goggles, other protective clothing.
General Hygiene Measures	Wash thoroughly after handling

## Section 9- Physical and Chemical Properties

Appearance	
Physical State	
GST Resin	Liquid
Glutathione, reduced	Powder
Enterokinase	Liquid
Expression Vector	Liquid
Property	
GST Resin	Molecular Weight
Glutathione, reduced	Not available
Enterokinase	307.33
Expression Vector	Not available
pH	Not available
BP/BP Range	Not available

MP/MP Range	Not available
Freezing Point	300°C(572°F)
Vapor Pressure	Not available
Vapor Density	Not available
Saturated Vapor Conc.	Not available
SG/Density	Not available
Bulk Density	Not available
Odor Threshold	Not available
Volatile%	Not available
VOC Content	Not available
Water Content	Not available
Solvent Content	Not available
Evaporation Rate	Not available
Viscosity	Not available
Surface Tension	Not available
Partition Coefficient	Not available
Decomposition Temp.	Not available
Flash Point	Not available
Explosion Limits	Not available
Flammability	Not available
Autoignition Temp	Not available
Refractive Index	Not available
Optical Rotation	Not available
Miscellaneous Data	Not available
Solubility	
GST Resin	Partially soluble in the following materials: cold water and hot water.
Glutathione, reduced	Soluble in water
Enterokinase	Soluble in water
Expression Vector	Soluble in water

### Section 10- Stability and Reactivity

Stability	
Stable	Stable
Hazardous Decomposition Products	
Hazardous Decomposition Products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hazardous Polymerization	
Hazardous Polymerization	Will not occur

### Section 11- Toxicological Information

Route of Exposure	
Skin Contact	May cause skin irritation
Skin Absorption	May be harmful if absorbed through the skin
Inhalation	Material may be irritating to mucous membranes and upper respiratory tract, May be harmful if inhaled.
Ingestion	May be harmful if swallowed
Conditions Aggravated by Exposure	The toxicological properties have not been thoroughly investigated.

### Section 12- Ecological Information

No data available.

### Section 13- Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation	Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.
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**Section 14- Transport Information**

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## DOT

Proper Shipping Name	None
Non-Hazardous for Transport	This substance is considered to be non-hazardous for transport.

## IATA

Non-Hazardous for Air Transport	Non-hazardous for air transport
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**Section 15- Regulatory Information**

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## US Classification and Label Text

US Statements	Caution: The chemical, physical, and toxicological properties of this product have not been thoroughly investigated. Exercise due care.
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## United States Regulatory information

SARA Listed	Not available
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## Canada Regulatory information

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.
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DSL	Not available
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NDSL	Not available
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**Section 16- Other Information**

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GenScript corporation MSDS is believed to be correct but only used as a guide for experienced personnel, GenScript shall not be held liable for any damage resulting from the handling or from contact with the above product.