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Version 3

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name Human Brain Cerebellum Protein Medley

Other means of identification

Product Code 635326
Registration number No information available

Recommended use of the chemical and restrictions on use

Identified uses For research use only. Not for use in diagnostic procedures.
Uses advised against No information available.

Details of the supplier of the safety data sheet

Supplier

Japan:
Takara Bio Inc.
Nojihigashi 7-4-38
Kusatsu, Shiga 525-0058, Japan
Phone: +81.77.565.6972
Web: www.takara-bio.com

China:
Takara Biomedical Technology (Beijing) Co., Ltd.
Life Science Park, 22 KeXueYuan Road, Changping District,
Beijing 102206, China
Phone: +86 10 8072 0980
Web: www.takara.com.cn

Korea:
Takara Korea Biomedical Inc.
601, New T Castle, 108, Gasan Digital 2-ro, Geumcheon-gu
Seoul 08506, Korea
Phone: +82 2 2081 2525
Web: www.takara.co.kr

Emergency telephone number

Emergency telephone In case of emergency, call PERS (Professional Emergency Resource Services) 1-800-633-8253 (US) or 801-629-0667 (international).

Section 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

Acute Toxicity - Dermal	Category 3
Serious Eye Damage/Eye Irritation	Category 2A
Specific Target Organ Toxicity (Single Exposure)	Category 2
Acute Aquatic Toxicity	Category 2
Chronic Aquatic Toxicity	Category 2

Label elements**Signal Word**

Danger

Hazard Statements

H311 - Toxic in contact with skin
 H319 - Causes serious eye irritation
 H371 - May cause damage to organs
 H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements - Prevention

Wear protective gloves/protective clothing/eye protection/face protection. Wash face, hands and any exposed skin thoroughly after handling. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Avoid release to the environment.

Precautionary Statements - Response

- IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- If eye irritation persists: Get medical advice/attention

IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.
 Collect spillage.

Precautionary Statements - Storage

Store locked up.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other information

May be harmful if swallowed. Causes mild skin irritation.

Hazards not otherwise classified (HNOC) Not applicable

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**Substance / Mixture**

Chemical Name	Weight %	ENCS	ISHL No	CAS-No
2-Mercaptoethanol 60-24-2	5 - 10	X	(2)-458	60-24-2
Sodium dodecyl sulphate 151-21-3	1 - 5	X	(2)-1679,(2)-1675 (2)-1679	151-21-3

Chemical Name	Poisonous and Deleterious Substances Control Law
2-Mercaptoethanol 60-24-2	Poisonous Deleterious

Chemical Name	Pollutant Release and Transfer Register (Class I):	Pollutant Release and Transfer Register (Class II):
Sodium dodecyl sulphate 151-21-3	275	-

Section 4: FIRST AID MEASURES

General advice	In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
Inhalation	Move to fresh air.
Skin contact	Wash off immediately with plenty of water for at least 15 minutes.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Ingestion	Never give anything by mouth to an unconscious person. If symptoms persist, call a physician. Not an expected route of exposure.
Notes to physician	Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

Flammable Properties	May cause fire.
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable Extinguishing Media	No information available.
Specific hazards arising from the chemical	Keep product and empty container away from heat and sources of ignition.
Special Extinguishing Media	Cool drums with water spray.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions	For personal protection see section 8.
Environmental precautions	Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Soak up with inert absorbent material.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

Section 7: HANDLING AND STORAGE

Handling

Advice on safe handling Avoid contact with skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice.

Storage

Technical measures/Storage conditions Keep container tightly closed in a dry and well-ventilated place.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
Other information	These recommendations apply to the product as supplied.
Engineering Measures	Ensure adequate ventilation, especially in confined areas.
<u>Personal Protective Equipment</u>	
Respiratory protection	None under normal use conditions.
Hand Protection	Latex gloves.
Eye/Face Protection	Tightly fitting safety goggles.
Skin and body protection	Wear suitable protective equipment. Boots.
Hygiene measures	When using, do not eat, drink or smoke. Handle in accordance with good industrial hygiene and safety practice.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	Odor	Characteristic
Appearance	Blue	Odor Threshold	No information available
Color	Blue		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH VALUE	No information available	
Melting point / freezing point	No information available /	
Boiling point/boiling range (°C)	No information available	
Flash point	No information available	
Evaporation Rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Relative density	No information available	
Water Solubility	Not applicable	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature		
Decomposition temperature	No information available	
Viscosity, kinematic	No information available	
Viscosity, dynamic		
Explosive properties	No information available	
Oxidizing Properties	No information available	

Other information

VOC Content (%)	No information available
Bulk Density	No information available

Section 10: STABILITY AND REACTIVITY

Reactivity	No dangerous reaction known under conditions of normal use.
Stability	Stable under normal conditions.
Explosion Data	
Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.
Hazardous Reactions	None under normal processing.
Conditions to Avoid	None known based on information supplied.
Hazardous Decomposition Products	None under normal use conditions.

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Numerical measures of toxicity - Product Information

Unknown acute toxicity

10.9355 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
 10.9355 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
 27.9355 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
 27.9355 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
 27.9355 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	3,522.00 mg/kg
ATEmix (dermal)	803.00 mg/kg
ATEmix (inhalation-gas)	No information available
ATEmix (inhalation-dust/mist)	No information available
ATEmix (inhalation-vapor)	No information available

Numerical measures of toxicity - Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
2-Mercaptoethanol	= 244 mg/kg (Rat)	112 - 224 mg/kg (Rabbit) = 150 µL/kg (Rabbit)	-
Sodium dodecyl sulphate	= 1288 mg/kg (Rat) = 1783 mg/kg (Rat)	= 200 mg/kg (Rabbit)	> 3900 mg/m ³ (Rat) 1 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	No information available.
Serious Eye Damage/Eye Irritation	No information available.
Sensitization	No information available.
mutagenic effects	No information available.
Reproductive toxicity	No information available.

STOT - Single Exposure	No information available.
STOT - Repeated Exposure	No information available.
Neurological effects	No information available.
Target Organ Effects	No information available.
Aspiration Hazard	No information available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

11 % of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Toxic to aquatic life with long lasting effects

Chemical Name	Algae/aquatic plants	Fish	Toxicity to daphnia and other aquatic invertebrates
2-Mercaptoethanol	12: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50	46 - 100: 96 h <i>Leuciscus idus</i> mg/L LC50 static	1.52: 48 h <i>Daphnia magna</i> mg/L EC50
Sodium dodecyl sulphate	3.59 - 15.6: 96 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50 static 30 - 100: 96 h <i>Desmodesmus subspicatus</i> mg/L EC50 117: 96 h <i>Pseudokirchneriella subcapitata</i> mg/L EC50 42: 96 h <i>Desmodesmus subspicatus</i> mg/L EC50 53: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50	10.2 - 22.5: 96 h <i>Pimephales promelas</i> mg/L LC50 semi-static 10.8 - 16.6: 96 h <i>Poecilia reticulata</i> mg/L LC50 static 13.5 - 18.3: 96 h <i>Poecilia reticulata</i> mg/L LC50 semi-static 15 - 18.9: 96 h <i>Pimephales promelas</i> mg/L LC50 static 22.1 - 22.8: 96 h <i>Pimephales promelas</i> mg/L LC50 static 4.06 - 5.75: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static 4.2 - 4.8: 96 h <i>Lepomis macrochirus</i> mg/L LC50 flow-through 4.3 - 8.5: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 static 5.8 - 7.5: 96 h <i>Pimephales promelas</i> mg/L LC50 static 6.2 - 9.6: 96 h <i>Pimephales promelas</i> mg/L LC50 8 - 12.5: 96 h <i>Pimephales promelas</i> mg/L LC50 static 9.9 - 20.1: 96 h <i>Brachydanio rerio</i> mg/L LC50 semi-static 1.31: 96 h <i>Cyprinus carpio</i> mg/L LC50 semi-static 4.1: 48 h <i>Leuciscus idus</i> mg/L LC50 static 4.2: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 4.5: 96 h <i>Lepomis macrochirus</i> mg/L LC50 4.62: 96 h <i>Oncorhynchus mykiss</i> mg/L LC50 flow-through 7.97: 96 h <i>Brachydanio rerio</i> mg/L LC50 flow-through	1.8: 48 h <i>Daphnia magna</i> mg/L EC50 21.2: 24 h <i>Daphnia magna</i> mg/L EC50

Persistence and degradability No information available.

Bioaccumulation No information available.

Mobility No information available.

Section 13: DISPOSAL CONSIDERATIONS

Waste from Residues / Unused Products Dispose of as hazardous waste in compliance with local and national regulations.

Contaminated packaging Dispose of in accordance with local regulations.

Section 14: TRANSPORT INFORMATION

IMDG/IMO

UN/ID no UN3287
Proper Shipping Name Toxic liquid, inorganic, n.o.s.
Hazard Class 6.1
Packing group II
EmS-No F-A, S-A
Description UN3287, Toxic liquid, inorganic, n.o.s. (Glycerol, Protein Medley Tissue), 6.1, II, Marine Pollutant

ICAO

UN/ID no UN3287
Proper Shipping Name Toxic liquid, inorganic, n.o.s.
Hazard Class 6.1
Packing group II
Description UN3287, Toxic liquid, inorganic, n.o.s. (Glycerol, Protein Medley Tissue), 6.1, II
Special Provisions A3, A4, A137

ADR/RID

UN/ID no UN3287
Proper Shipping Name Toxic liquid, inorganic, n.o.s.
Hazard Class 6.1
Packing group II
ERG Code 6L
Description UN3287, Toxic liquid, inorganic, n.o.s. (Glycerol, Protein Medley Tissue), 6.1, II, ENVIRONMENTALLY HAZARDOUS
Environmental Hazard Yes
Special Provisions 274
ADR/RID-Labels 6.1

ICAO/IATA

UN/ID no UN3287
Proper Shipping Name Toxic liquid, inorganic, n.o.s.
Hazard Class 6.1
Packing group II
Description UN3287, Toxic liquid, inorganic, n.o.s. (Glycerol, Protein Medley Tissue), 6.1, II

Japan

UN Number UN3287
Proper Shipping Name Toxic liquid, inorganic, n.o.s.
Hazard Class 6.1
Packing group II
Description UN3287, Toxic liquid, inorganic, n.o.s. (Glycerol, Protein Medley Tissue), 6.1, II
Special Provisions 274, 315

Section 15: REGULATORY INFORMATION

International Inventories For research use only

TSCA	-
DSL/NDSL	-
EINECS/ELINCS	-
ENCS	-
IECSC	-
KECL	-
PICCS	-
AICS	-

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

Japan

Chemical Name	Pollutant Release and Transfer Register (Class II):	Pollutant Release and Transfer Register (Class I):	Poisonous and Deleterious Substances Control Law	Restrictions on use
2-Mercaptoethanol 60-24-2	Not Applicable	-	Deleterious, >0% [Order Article 2-1-100-16] (except mixtures containing ≤0.1% 2-Mercaptoethanol, volume ≤20 L, listed under 2-Mercaptoethanol and its preparations); Poisonous, >10% [Order Article 1-26-12] (listed under 2-Mercaptoethanol and its preparations) -X	Group 4
Sodium dodecyl sulphate 151-21-3	Not Applicable	275	Not Applicable	-

Section 16: OTHER INFORMATION

Issuing Date	2020-04-08
Revision Date	2020-04-08
Revision Note	No information available.

Key or legend to abbreviations and acronyms used in the safety data sheet

- No information available

Disclaimer

This SDS complies with the requirements of JIS Z 7252:2014 and JIS Z 7253:2012 (Japan). The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

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End of Safety Data Sheet