

Safety Data Sheet

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

Identification of the substance or mixture

Product code PHG0311
Product name Recombinant Human EGF

Company/undertaking identification

Life Technologies Corporation
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Life Technologies
5250 Mainway Drive
Burlington, ONT
CANADA L7L 6A4
800/263-6236

24 hour Emergency Response for Hazardous Materials [or Dangerous Goods] Incident. Spill, Leak, Fire, Exposure, or Accident. Call CHEMTREC Within the USA + Canada: 1-800-424-9300 and 1-703-527-3887
Outside the USA + Canada: 1-703-741-5970

Country Specific Emergency Number (if available):

For research use only. Not for use in diagnostic procedures

SECTION 2: Hazards identification

GHS Classification

Signal Word
DANGER

Hazard pictograms





Health hazards

Respiratory sensitization	Category 1
Skin sensitization	Category 1

Physical hazards

GHS Physical Hazard	Flammable liquids
GHS Physical Hazard Category Number	Category 4

Environmental hazards

Not Hazardous

Hazard Statements

H227 - Combustible liquid

H317 - May cause an allergic skin reaction

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

Precautionary Statements

Prevention

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P284 - Wear respiratory protection

P272 - Contaminated work clothing should not be allowed out of the workplace

Response

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

DO NOT USE: P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction

P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention

P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician

Storage

P403 - Store in a well-ventilated place

Disposal

P501 - Dispose of contents/ container to an approved waste disposal plant

Other hazards

Not Applicable

HMIS

Health	4
Flammability	0
Reactivity	0

SECTION 3: Composition/information on ingredients

Chemical Name	CAS No.	Common name	EINECS-No	Weight-%
Disodium [2S-(2.alpha.,5.alpha.,6.beta.)]-6-(carboxylatophenylacetamido)-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylate	4800-94-6	Not applicable	225-360-8	<1
Glycerol	56-81-5	Not applicable	200-289-5	40-70
Ethyl alcohol	64-17-5	Not applicable	200-578-6	3-7

We recommend handling all chemicals with caution.

SECTION 4: First aid measures

Description of first aid measures

Skin contact	Rinse skin with water. Remove and wash contaminated clothing and gloves, including the inside, before re-use. In case of skin reactions, consult a physician.
Eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Ingestion	Not expected to present a significant ingestion hazard under anticipated conditions of normal use. If you feel unwell, seek medical advice.
Inhalation	If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. Call a physician or poison control center immediately.
Notes to Physician	Treat symptomatically.

Most important symptoms and effects, both acute and delayed

H227 - Combustible liquid H317 - May cause an allergic skin reaction H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

Indication of any immediate medical attention and special treatment needed

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. If skin irritation or rash occurs: Get medical advice/attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media	Water spray. Carbon dioxide (CO ₂). Foam. Dry chemical.
Unsuitable extinguishing media	No information available.

Special hazards arising from the substance or mixture

Not known

Advice for firefighters

Standard procedure for chemical fires.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation
 Always wear recommended Personal Protective Equipment
 Use personal protection equipment
 See section 8 for more information

Environmental precautions

No special environmental precautions required.

Methods and material for containment and cleaning up

Soak up with inert absorbent material.

Reference to other sections

See section 8 for more information.

SECTION 7: Handling and storage

Precautions for safe handling

Use personal protective equipment as required. No special handling advices are necessary.

Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place. Keep in properly labeled containers.

Specific end use(s)

For research use only.

SECTION 8: Exposure controls/personal protection

Control parameters

Chemical Name	OSHA PEL	OSHA PEL (Ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Disodium [2S-(2.alpha.,5.alpha.,6.beta.)]-6-(carboxylatophenylacetamido)-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylate	None	None	None	None
Glycerol	15 mg/m ³ 5 mg/m ³	None	None	None
Ethyl alcohol	1000 ppm 1900 mg/m ³	None	None	1000 ppm

Chemical Name	Brazil - OEL - TWAs (LTs)	Brazil - OEL - Ceilings	Brazil - OEL - Skin Designations
Disodium [2S-(2.alpha.,5.alpha.,6.beta.)]-6-(carboxylatophenylacetamido)-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylate	None	None	None
Glycerol	None	None	None
Ethyl alcohol	780 ppm 1480 mg/m ³	None	None

Engineering Measures Ensure adequate ventilation, especially in confined areas.

Exposure controls

Personal Protective Equipment

Respiratory protection In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.

Hand protection Wear suitable gloves. Glove material: Compatible chemical-resistant gloves.

Eye protection Tight sealing safety goggles.

Skin and Body Protection Wear suitable protective clothing.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice

Environmental exposure controls

No special environmental precautions required.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state	liquid	
Color	No data	
Odor	No data available	
Molecular Weight	No data	
Melting point / melting range	°C >60 – 70	°F 140-158
Boiling point / boiling range	°C No data	°F No data
Flammability (solid, gas)	No data available	
Lower explosion limit	No data	
Upper explosion limit	No data	
Flash point	°C No data	°F No data
Autoignition Temperature	°C No data	°F No data
Decomposition temperature	°C No data	°F No data
pH	Not Applicable	
Evaporation rate	No data	
Viscosity	No data	
Solubility	No data available	
Partition coefficient: n-octanol/water	No data available	
Vapor Pressure	No data	
Specific gravity	No data	
Relative density	No data	
Vapor density	No data	
Explosive properties	No data	
Oxidizing properties	No data	
Particle characteristics	No data	

Other information

Information with regard to physical hazard classes

No information available

Other safety characteristics

No information available

SECTION 10: Stability and reactivity

Reactivity	None known.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Hazardous reaction has not been reported.
Conditions to avoid	No information available.
Incompatible materials	No dangerous reaction known under conditions of normal use.
Hazardous decomposition products	No data available.

SECTION 11: Toxicological information

Information on toxicological effects

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Disodium [2S-(2.alpha.,5.alpha.,6.beta.)]-6-(carboxylatophenylacetamido)-3,3- dimethyl-7-oxo-4-thia-1-azabicyclo [3.2.0]heptane-2-carboxylate	> 10 g/kg (Rat)	No data available	No data available
Glycerol	= 12600 mg/kg Oral	> 10 g/kg(Rabbit)	>2.75mg/L(Rat)
Ethyl alcohol	= 7060 mg/kg (Rat)	No data available	=133.8mg/L(Rat) =116.9mg/L(Rat)

Principal Routes of Exposure

Acute toxicity	Data are conclusive but insufficient for classification.
Skin corrosion/irritation	Data are conclusive but insufficient for classification
Serious eye damage/irritation	Data are conclusive but insufficient for classification
Respiratory or skin sensitization	May cause sensitization by inhalation and skin contact
Specific target organ toxicity (STOT) – single exposure	Data are conclusive but insufficient for classification
Specific target organ toxicity (STOT) – repeated exposure	Data are conclusive but insufficient for classification
Carcinogenicity	Data are conclusive but insufficient for classification
Germ cell mutagenicity	Data are conclusive but insufficient for classification
Reproductive toxicity	Data are conclusive but insufficient for classification
Aspiration hazard	Data are conclusive but insufficient for classification

SECTION 12: Ecological information

Toxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Microtox Data	log Pow
Disodium [2S-(2.alpha.,5.alpha.,6.beta.)]-6-(carboxylatophenylacetamido)-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylate	No data available	No data available	No data available	No data available	No data available
Glycerol	No data available	No data available	No data available	No data available	logPow-1.76
Ethyl alcohol	No data available	Daphnia magna EC50=2 mg/L (48 h) Daphnia magna LC509268 - 14221 mg/L (48 h)	No data available	No data available	logPow-0.32

Mobility in soil No information available.

Persistence and degradability No information available.

Bioaccumulative potential No information available.

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other adverse effects No information available.

SECTION 13: Disposal considerations

Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in accordance with approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations.

SECTION 14: Transport information

IATA / ADR / DOT-US / IMDG

Not classified as dangerous in the meaning of transport regulations

UN number or ID number	Not Applicable
UN proper shipping name	Not Applicable
Transport hazard class(es)	Not Applicable
Packing group	Not Applicable

Environmental hazards

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Not Applicable

Special precautions for user

Not Applicable

Maritime transport in bulk according to IMO instruments

Not Applicable.

SECTION 15: Regulatory information

Component	US TSCA
Disodium [2S-(2.alpha.,5.alpha.,6.beta.)]-6-(carboxylatophenylacetamido)- 3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxyl ate 4800-94-6 (<1)	-
Glycerol 56-81-5 (40-70)	Listed
Ethyl alcohol 64-17-5 (3-7)	Listed

US Federal Regulations

SARA 313

This product is not regulated by SARA.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain HAPs

US State Regulations

Chemical Name	Massachusetts - RTK (Right-to-Know)	New Jersey - RTK (Right-to-Know)	Pennsylvania - RTK (Right-to-Know)
Glycerol	Listed	Listed	Listed
Ethyl alcohol	Listed	Listed	Listed

California Proposition 65

Proposition 65 lists ethanol in alcoholic beverages.

Chemical Name

Ethyl alcohol

CAS No.

64-17-5

Weight-%

3-7

Category

Carcinogen
Developmental

WHMIS Hazard Class

D2A - Very toxic materials

B3 - Combustible liquid

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

National Regulations - Brazil

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<u>Chemical Name</u>	<u>CAS No.</u>	<u>Brazil - National Agency for Sanitary Surveillance (ANVISA)</u>	<u>Brazil - National List of Carcinogen Agents to Humans (LINACH)</u>
Disodium [2S-(2.alpha.,5.alpha.,6.beta.)]-6-(carboxylatophenylacetamido)-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylate	4800-94-6	Not Listed	Not Listed
Glycerol	56-81-5	Not Listed	Not Listed
Ethyl alcohol	64-17-5	Not Listed	Group 1

SECTION 16: Other information

Reason for revision SDS sections updated.
Revision number 3
Revision date 18-Nov-2021

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References

- ECHA: <http://echa.europa.eu/>
- TOXNET: <http://toxnet.nlm.nih.gov/>
- eChemPortal: <http://www.echemportal.org/>
- LOLI database: <https://www.chemadvisor.com/loli-database>

Abbreviations and acronyms

TWA - Time-Weighted Average
OELs - Occupational Exposure Limits
STEL - Short Term Exposure Limit
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
KECL - Korean Existing and Evaluated Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
CEPA - Canadian Environmental Protection Act
EPA - Environmental Protection Agency
OSHA - Occupational Safety and Health Administration of the US Department of Labor
IATA - International Air Transport Association
DOT - Department of Transportation
IMDG - International Maritime Dangerous Goods
ACGIH - American Conference of Governmental Industrial Hygienists
NIOSH - National Institute for Occupational Safety and Health
AIHA - American Industrial Hygiene Association
HMIS - Department of Defense Hazardous Materials Information System
NTP - National Toxicology Program
IARC - International Agency for Research on Cancer

"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 present unknown hazards and should be used with caution.

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End of Safety Data Sheet