



SAFETY DATA SHEET

Revision Date 7/26/2016

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Identification

Product Name : Met-Enkephalin - EIA Kit, Host: Rabbit, High Sensitivity
Product Code : S-1419.0001 (EIAH)
CAS-No. : N/A; mixture

1.2 Company Identification

Peninsula Laboratories International, Inc.
305 Old County Road
San Carlos, CA 94070
USA

Telephone : (650) 801-6090
Fax : (650) 595-4071

Emergency : (650) 801-6090 (8:30am-5pm Pacific Time)

1.3 Recommended use and Restrictions on use

Laboratory reagent, Research Use Only

2. HAZARD(S) IDENTIFICATION

2.1 Classification of the mixture (Each component listed separately)

GHS-US Classification in accordance with 29 CFR 1910 (OSHA HCS)

Standard Peptide, Biotinylated tracer, Primary antiserum- lyophilized powder

Serious eye damage/eye irritation 2B, H320

EIA buffer 20X concentrate

Serious eye damage/eye irritation 2A, H319

HCl (2N)

Skin corrosion/irritation 1B, H314

Serious eye damage/eye irritation 1, H318

2.2 GHS Label elements, including precautionary statements

Standard Peptide, Biotinylated tracer, Primary antiserum- lyophilized powder



Hazard Pictogram :

Signal Word : Warning

Hazard statements : H320 Causes eye irritation.

Precautionary statements : P264 Wash exposed skin thoroughly after handling.



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P280 Wear protective gloves, protective clothing, eye protection, face protection.
P305/P351/P338 If in eyes, Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
P337/P313 If eye irritation persists, get medical advice/attention.

EIA buffer 20X concentrate



Hazard Pictogram :
Signal Word : Warning
Hazard statements : H319 Causes serious eye irritation.
Precautionary statements : P264 Wash exposed skin thoroughly after handling.
P280 Wear protective gloves, protective clothing, eye protection, face protection.
P305/P351/P338 If in eyes, Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
P337/P313 If eye irritation persists, get medical advice/attention.

HCl (2N)



Hazard Pictogram :
Signal Word : Danger
Hazard statements : H314 Causes severe skin burns and eye damage
H318 Causes serious eye damage
Precautionary statements : P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash exposed skin thoroughly after handling
P280 Wear protective gloves, protective clothing, eye protection, face protection.
P301/P330/P331 If swallowed, rinse mouth. Do not induce vomiting.
P302/ P361/P353 If on skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304/P340 If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305/P351/P338 If in eyes: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
P363 Wash contaminated clothing before reuse.
P310 Immediately call a POISON CENTER or doctor/physician.
P405 Store locked up.
P501 Dispose contents/container to comply with local, state and federal regulations.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Harmful by inhalation, ingestion, or skin absorption.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance : Not applicable



3.2 Mixture :

PRINCIPLE COMPONENTS	CONCENTRATION	CAS No	GHS-US CLASSIFICATION
Thimerosal	.05% 20X buffer concentrate .8% w/w lyophilized reagents powder	54-64-8	Acute Tox Oral, 2; Acute Tox Dermal 1; STOT RE2; Aquatic Acute 1; Aquatic Chronic 1; H300, H310, H330, H373, H400, H410
Sodium Phosphate monobasic monohydrate	10.8% w/w lyophilized reagents powder	10049-21-5	Not classified
Sodium Phosphate dibasic anhydrous	47.3% w/w lyophilized reagents powder	7558-79-4	Eye irritant 2B H320
Bovine Serum Albumin	1% 20X buffer concentrate 41.1% w/w lyophilized reagents powder	9048-46-8	Not classified
Sodium Chloride	3M (17.5%) 20X buffer concentrate	7647-14-5	Eye irritant 2A H319
Tris base; Tris-(hydroxymethyl)aminomethane	.39% 20X buffer concentrate	77-86-1	Not classified
Tris HCl; Tris-(hydroxymethyl)aminomethane hydrochloride	2.6% 20X buffer concentrate	1185-53-1	Not classified
Tween-20	2% 20X buffer concentrate	9005-64-5	Not classified
HCl; Hydrochloric acid	2N (7%)	7647-01-0	Skin corrosion/irritation 1B; Serious eye damage/eye irritation 1; H314 H318
Substrate (a proprietary mixture) including: 3,3',5,5'-Tetramethylbenzidine (TMB) and H2O2	<1% in Substrate solution <1% in Substrate solution	54827-17-7 7722-84-1	Skin irritant 2; Serious eye damage/eye irritation 2A; Respiratory tract irritation 3; Reproductive Tox- 1A,1B; H315, H319, H335, H360
HRP-stabilizer	0.01% methylisothiazolone, 0.01% bromonitrodioxane 10 ppm Proclin™ in HRP solution	2682-20-4 30007-47-7 NA	Acute Tox Oral, 4; Skin irritant 2; Sensitization (skin) 1; H302, H315, H317

4. FIRST-AID MEASURES

4.1 Description of First Aid Measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance.

Inhalation: Supply fresh air breathing. If not breathing, give artificial respiration. Consult a physician.

Ingestion: Rinse mouth with water. Consult a poison center or physician.

In case of skin contact: Immediately remove all contaminated clothing. Wash with soap and plenty of water. Consult a physician.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes. Consult a poison center or physician.

4.2 Important Symptoms/Effects, acute and delayed

See section 2.2.



4.3 Required treatment

Obtain medical assistance.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing agents

Suitable extinguishing agents: Use water spray, alcohol resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing agents: Do not use a heavy water stream.

5.2 Special hazards arising from the substance or mixture

Carbon oxides, Sulfur oxides, sodium oxides, mercury/mercury oxides.

5.3 Advice for firefighters

Protective equipment: Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Wear respiratory protection, safety glasses, gloves, protective clothing including a full length lab coat (see section 8). Avoid dust formation. Avoid breathing dust, vapors, mist, or gas. Ensure adequate ventilation. Evacuate unnecessary personnel to safe areas. Avoid breathing dust. Avoid contact and inhalation. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling.

6.2 Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided. Notify authorities if liquid enters sewers or public waters.

6.3 Methods and material for containment and cleanup: Pick up and arrange disposal without creating dust. Sweep up and shovel. Do not flush with water. Blot spills with inert solids, such as sand, clay, diatomaceous earth, acid binders, universal binders, or sawdust as soon as possible. Collect spillage and absorbent material and place in closed container, store away from other materials, for proper disposal. Wash spill site thoroughly and discard contaminated cleanup items in closed container for proper disposal.

6.4 Disposal: Dispose in accordance with local regulation.

6.5 References to other sections

See Section 8 Exposure Controls and personal protection.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling and hygiene

Avoid contact is skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation in work area to prevent vapor buildup. Do not breathe dust, mist, vapors, spray. Wash hands and other exposed



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skin with mild soap and water before eating, drinking, or smoking and when leaving work. Wash contaminated clothing before reusing. See precautions section 2.2

7.2 Conditions for safe storage, and incompatibilities

Technical measures : Comply with applicable regulations.

Storage conditions : Keep container closed when not in use, in a dry and well-ventilated place

7.3 Specific end use(s)

Apart from uses listed in Section 1.3, no other specific uses are stipulated.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

Components with workplace control parameters:

Component	CAS-No.	Value	Control parameters	Basis
Thimerosal	54-64-8	TWA	0.050000 mg/m3	USA. NIOSH Recommended Exposure Limits
	Remarks	Potential for dermal absorption		
		C	0.100000 mg/m3	USA. NIOSH Recommended Exposure Limits
		Potential for dermal absorption		
		TWA	0.100000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Central Nervous System impairment Kidney damage Danger of cutaneous absorption varies		
		TWA	0.0100000 mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Central Nervous System impairment Kidney damage Peripheral Nervous System impairment Danger of cutaneous absorption varies		
		STEL	0.030000mg/m3	USA. ACGIH Threshold Limit Values (TLV)
		Central Nervous System impairment Kidney damage Peripheral Nervous System impairment Danger of cutaneous absorption varies		

8.2 Exposure Controls

Appropriate engineering controls : Avoid contact with skin, eyes, and clothing. General industrial hygiene practice. Wash hands before breaks and immediately after handling the product.

Personal protective equipment : Avoid all unnecessary exposure by using the following equipment:

Hand protection : Handle with gloves. Gloves must be inspected before use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminate gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection : Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).



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Skin and body protection : Wear suitable protective clothing, such as a laboratory coat. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection : Where risk assessment shows air-purifying respirators are appropriate, use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Other information : Do not eat, drink, or smoke during use.

Control of environmental exposure : Prevent further leakage and spillage if safe to do so. Do not let product enter drains. Discharge into the environment should be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	: Lyophilized reagents: white powder : Liquid reagents: clear or pale beige
Odor	: No data available
Odor threshold	: No data available
pH	: No data available
Relative evaporation rate	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Self-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor Pressure	: No data available
Relative vapor density at 20C	: No data available
Relative density	: No data available
Density	: No data available
Solubility	: Soluble in water
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosive limits	: No data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid



No data available.

10.5 Incompatible materials

Strong oxidizing agents. Strong acids. Strong bases.

10.6 Hazardous decomposition products

Other decomposition products- No data available.

In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity

LD50 Oral – rat – no data available (HCl 2N)

LD50 Oral – rat – 75 mg/kg (thimerosal)

LD50 Oral – rat – 17g/kg (sodium phosphate dibasic anhydrous)

LD50 Oral – rat - 36700 µL/kg (Tween-20)

Inhalation: No data available.

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Nutritional and Gross Metabolic: changes in metabolic acidosis. (thimerosal)

Behavioral: Ataxia.

LD50 Subcutaneous – rat – 98 mg/kg (thimerosal)

Skin corrosion

No data available (thimerosal). May cause skin irritation (sodium phosphate dibasic anhydrous).

Serious eye damage/irritation

Eyes – rabbit

Result: mild eye irritation.

Respiratory or skin sensitization

Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

Germ cell mutagenicity

Hamster

Lungs

Micronucleus test

Mouse

Micronucleus test

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as known or anticipated carcinogen by NTP.



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OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available.

Specific target organ toxicity (single exposure)

No data available.

Specific target organ toxicity (repeated exposure)

No data available.

Aspiration hazard

No data available.

Additional information

RTECS: Not available.

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. It is the users' responsibility to determine the suitability of this information for the adoption of safety precautions as may be necessary. Peninsula Laboratories International, Inc. shall not be held liable for any damage resulting from the handling of the above product.