

MATERIAL SAFETY DATA SHEET

(Version 1.1; Revision date:10 /28/2019)



1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name: Mouse Arginase 1 (Liver type) ELISA Kit

Product Number: EK-07-1054

Brand: ErpanTech

1.2 Recommended use

This ELISA kit can be only used for research, not for diagnostic or therapeutic purposes. All components in the ELISA kit are well-packaged for use.

1.3 Details of the supplier

| | |
|-------------------------|--|
| Company identification: | Erpan Info Tech (Shanghai) CO., LTD |
| Address: | 951 Jianchuan Rd (Building 2), Minhang District, Shanghai, China, 200240 |
| Telephone: | 011-86-21-33283301 |
| E-mail address: | Info@erpantech.com |

2. HAZARDS IDENTIFICATION

2.1 GHS – Classification

2.2 Ozone: Not applicable

2.3 GHS Label elements, including precautionary statements

2.4 Other information

No information available

2.5 Signal word

None

2.6 Hazard pictograms

None

2.7 Health hazards

Not Hazardous

2.8 Physical hazards

Not Hazardous

2.9 Environmental hazards

Not Hazardous

2.10 Hazard Statements

Not Applicable

2.11 Precautionary Statements

2.12 Prevention

Not Applicable

2.13 Response

Not Applicable

2.14 Storage

Not Applicable

2.15 Disposal

Not Applicable

2.16 Other hazards

Not Applicable

2.17 Specific effects

Carcinogenic effects

None

Reproductive toxicity

None

Sensitization

None

2.17 HMIS

Health: 0

Flammability: 0

Reactivity: 0

3. COMPOSITION/INFORMATION ON INGREDIENTS

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| HAZARDOUS INGREDIENTS: Antigen COATED MICROTITER PLATE | CAS# | EINECS# | ICSC# | Amount | Hazard Classification; Hazard Phrases |
|---|------------|------------|-----------------|--------|---|
| Affinity Purified Rabbit Antibody | Not Listed | Not Listed | Not Established | <100µg | Not classified None |
| HAZARDOUS INGREDIENTS: STANDARDS: 6vials, 0.5ml/vial | CAS# | EINECS# | ICSC# | Amount | Hazard Classification; Hazard Phrases |
| Recombinant protein from E.coil | Not Listed | Not Listed | Not Established | <0.1% | Not classified None |
| Distilled Water | 7732-18-5 | 231-791-2 | Not Listed | >90% | Not classified None |
| ProCline 300 Preservative | 55965-84-9 | Not Listed | 613-167-0005 | <0.1% | Irritant Hazard Phrases: H302, H314, H317, H332; H410 Precaution Phrases: P273, P280, P305 + P351 + P338, P310, P501 |
| HAZARDOUS INGREDIENTS: ENZYME CONJUGATE 6ml | CAS# | EINECS# | ICSC# | Amount | Hazard Classification; Hazard Phrases |
| HRP conjugate antibody | Not Listed | Not Listed | Not Established | <100ug | Not classified None |
| ProClin 300 Preservative | 55965-84-9 | Not Listed | 613-167-0005 | <0.1% | Irritant Hazard Phrases: H302, H314, H317, H332; H410 Precaution Phrases: P273, P280, P305 + P351 + P338, P310, P501 |
| Tris Hydrochloride | 1185-53-1 | 214-684-5 | Not Listed | <1.0% | Not classified None |
| HAZARDOUS INGREDIENTS: WASHER BUFFER 10ml | CAS# | EINECS# | ICSC# | Amount | Hazard Classification; Hazard Phrases |
| Distilled Water | 7732-18-5 | 231-791-2 | Not Listed | >85% | Not classified None |
| Tris Hydrochloride | 1185-53-1 | 214-684-5 | Not Listed | <8.0% | Not classified None |
| Sodium Chloride | 7647-14-5 | 231-598-3 | Not Listed | <9.0% | Not classified None |
| Triton X-100 | 9002-93-1 | Not Listed | Not Listed | <1.0% | Irritant, Harmful Hazard Phrases: H318, H302 |
| HAZARDOUS INGREDIENTS: TMB SUBSTRATE SOLUTION | CAS# | EINECS# | ICSC# | Amount | Hazard Classification; Hazard Phrases |
| Distilled Water | 7732-18-5 | 231-791-2 | Not Listed | >95% | Not classified None |
| TMB | 54827-17-7 | 259-364-6 | Not Listed | <0,01% | Concentration is too low. |

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| HAZARDOUS INGREDIENTS: STOP SOLUTION 6ml | CAS# | EINECS# | ICSC# | Amount | Hazard Classification; Hazard Phrases |
|---|-----------|------------|------------|--------|---|
| Distilled water | 7732-18-5 | 231-791-2 | Not Listed | >95% | Not classified None |
| Sulphuric acid | 7664-93-9 | Not Listed | Not Listed | 1M | Hazard Classification: Highly corrosive Hazard Phrases: H314, Precaution Phases: P280- P305, P351, P338 |
| HAZARDOUS INGREDIENTS: BALANCE SOLUTION 6ml | CAS# | EINECS# | ICSC# | Amount | Hazard Classification; Hazard Phrases |
| Distilled water | 7732-18-5 | 231-791-2 | Not Listed | >95% | Not classified None |
| NP-40 Lysis Buffer | 9016-45-9 | Not Listed | Not Listed | 1% | HS-No: 34021300900 Hazard Symbols: H302-H318-H400 Precaution Phases: P273- P280-P305 + P351 + P338 |

4. FIRST AID MEASURES

4.1 Eye contact

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.

4.2 Skin contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

4.3 Inhalation

Immediately move to fresh air.

4.4 Ingestion

Clean mouth with water. Drink plenty of water.

4.5 Notes to physician

Treat symptomatically.

4.6 Most important symptoms and effects, both acute and delayed

Not Applicable

4.7 Indication of any immediate medical attention and special treatment needed

None

5. FIRE-FIGHTING MEASURES

5.1 Flammable properties

Not flammable

5.2 Flash point

Not determined

5.3 Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.4 Explosion Data

Sensitivity to Mechanical: None

Sensitivity to Static Discharge: None

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (Approved or equivalent) and full protective gear.

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6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions

Ensure adequate ventilation.

Always wear recommended personal protective equipment.

Environmental precautions

Try to prevent the material from entering drains or water courses.

6.2 Methods for containment

Prevent further leakage or spillage if safe to do so.

6.3 Methods for cleaning up

Soak up with proper absorbent materials and transfer to properly labeled containers.

6.4 Environmental precautions

No special environmental precautions required

7. HANDLING AND STORAGE

7.1 Advice on safe handling

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

7.2 Technical measures/Storage conditions

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

7.3 Specific end use(s)

For research use only

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure Guidelines

This product does not contain any hazardous materials with occupational exposure limits.

8.2

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|---------------|----------------------------|---------------------------------------|----------------------------|
| Sulfuric acid | TWA: 0.2 mg/m ³ | TWA: 1 mg/m ³ | IDLH: 15 mg/m ³ |
| 7664-93-9 | thoracic fraction | (Vacated) TWA: 1 mg/m ³ | TWA: 1 mg/m ³ |

NIOSH IDLH: Immediately Dangerous to Life or Health

8.3 Other Exposure Guidelines

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

8.4 Engineering measures

Showers

Eyewash stations

Ventilation systems: Ensure adequate ventilation, especially in confined areas.

8.5 Personal protective equipment

Eye/face protection: Tight sealing safety goggles

Hand, skin and body protection: Wear suitable and compatible chemical-resistant gloves and suitable protective lab clothing.

8.6 Respiratory protection

In case of insufficient ventilation, wear respirators provided in accordance with current local regulations.

8.6 Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

8.7 Environmental exposure controls

No special environmental precautions required

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Appearance

9.2 Odor

No information available

9.2 pH

No information available

9.3 Flash point

No information available

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9.4 Autoignition temperature

No information available

9.5 Decomposition temperature

No information available

9.9 Boiling point/boiling range

No information available

9.10 Melting point/range

No information available

9.11 Flammability limits in air

No information available

9.12 Explosion limits

No information available

9.13 Specific gravity

No data available

9.14 Solubility

No information available.

9.15 Evaporation rate

No information available

9.16 Vapor density

No data available

9.17 VOC Content (%)

Not applicable

9.18 Other information

No data available.

10. STABILITY AND REACTIVITY

10.1 Stability

Stable under recommended storage conditions

10.2 Incompatible products

None known based on information supplied.

10.3 Conditions to avoid

None known based on information supplied.

10.4 Hazardous decomposition products

None known based on information supplied.

10.5 Hazardous polymerization

Hazardous polymerization does not occur.

10.6 Incompatible materials

No dangerous reaction known under conditions of normal use

10.7 Possibility of hazardous reactions

Hazardous reaction has not been reported.

11. TOXICOLOGICAL INFORMATION

11.1 Acute toxicity

Product Information

Product does not present an acute toxicity hazard based on known or supplied information.

11.2 Chronic toxicity

Carcinogenicity: This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I)

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|---------------|-------|---------|-------|------|
| Sulfuric acid | A2 | Group 1 | Known | X |

11.3 ACGIH: (American Conference of Governmental Industrial Hygienists)

A2 - Suspected Human Carcinogen

11.4 IARC: (International Agency for Research on Cancer)

Group 1 - Carcinogenic to humans

11.5 NTP: (National Toxicity Program)

Known - Known Carcinogen

11.6 OSHA: (Occupational Safety & Health Administration)

X - Present

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11.7 Target Organ Effects

Eyes; Respiratory system; Skin; Teeth

No known effects under normal use conditions

12. ECOLOGICAL INFORMATION

12.2 Persistence and degradability

No information available

12.2 Bioaccumulative potential

No information available

12.3 Ecotoxicity

No information available

12.4 Mobility

No information available

Contains no substances known to be hazardous to the environment

13. DISPOSAL CONSIDERATION

Waste Disposal: This material, as supplied, is not a hazardous waste according to Federal regulations (40CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

This product contains sulfuric acid that is listed with the State of California as a hazardous waste.

14. TRANSPORT INFORMATION

14.1 IATA/ADR/DOT-US/IMDG/CNAS

Not regulated in the meaning of transport regulations.

14.2 Environmental hazards

Not Applicable

14.3 Special precautions for user

Not Applicable

14.4 Hazard Class

None

14.5 Subsidiary class

None

14.6 Packing group

None

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313: This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

| Chemical Name | CAS-No | Percent (%) | SARA 313 - Threshold Values % |
|-----------------------------------|-----------|-------------|-------------------------------|
| Sulfuric acid | 7664-93-9 | 1M | 1.0 |
| SARA 311/312 Hazard Category | | | |
| Acute Health Hazard | no | | |
| Chronic Health Hazard | no | | |
| Fire Hazard | no | | |
| Sudden Release of Pressure Hazard | no | | |
| Reactive Hazard | | | |

CERCLA: This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR

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355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

International Regulations

| Chemical Name | Carcinogen Status | Exposure limits |
|---------------|-------------------|-----------------|
| Sulfuric acid | A2 | |

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

16. OTHER INFORMATION

Disclaimer: 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 guideline 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. For further information please contact www.erpantech.com.