

Material Safety Data Sheet

Version 1.3 - Revision Date 06/11/2018

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Rat TNF-alpha ELISA Matched Antibody Pair Kit
Catalog Number: 41-9236-P002
Brand: Tonbo Biosciences
Supplier: Tonbo Biosciences
 6335 Ferris Square, Suite A
 San Diego, CA 92121
 USA

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Preparation Information: Tonbo Biosciences Product Safety
 +1 (855) 848-6626 toll-free

2. HAZARDS IDENTIFICATION

Classification of substance or mixture: Not a hazardous substance or mixture
GHS classification: Does not meet the classification criteria of the EC Directives 67/548/EEC, 1999/45/EC or 1272/2008

GHS labeling: Does not meet the need to be labeled in accordance with EC directives or respective national laws.

Special hazards: None

3. COMPOSITION / INFORMATION ON INGREDIENTS

| Ingredient name | % | CAS number |
|-----------------|---------|------------|
| Sodium chloride | 0.1-1.0 | 7647-14-5 |

Any concentration shown as a range is to protect confidentiality or is due to batch variation.
 There are no additional ingredients present which are classified as hazardous to health or the environment.

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4. FIRST AID MEASURES

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. If breathing is difficult give oxygen and consult a physician.

In case of skin contact

Wash off immediately with soap and plenty of water, remove any contaminated clothing, and consult a physician.

In case of eye contact

Flush eyes with water for at least 15 minutes and consult a physician.

If swallowed

Rinse mouth with water and consult a physician immediately.

5. FIREFIGHTING MEASURES

Conditions of flammability: Not flammable or combustible.

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Avoid breathing vapors, mist or gas. Use eye protection, gloves, and apron.

Environmental precautions

No special environmental precautions required.

Methods and materials for containment and cleaning up

Use a damp mop or sponge to clean up spill and surrounding area. Keep in suitable, closed containers for disposal. Ventilate area and wash site after material is picked up.

7. HANDLING AND STORAGE

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

Store Captured Antibody, Detection Antibody and Standard at -20°C until use. Store aliquoted Streptavidin-HRP Conjugate.

Special requirement: Light sensitive.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Ensure adequate ventilation. Use appropriate personal protective work clothing.

Personal protective equipment

Respiratory protection

Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

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

Eye protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

General industrial hygiene practice.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Capture Antibody, Detection Antibody, and Standard: Solid; White powder or thin/invisible film.
Streptavidin-HRP Conjugate: Liquid; amber

Safety data:

pH:

Capture Antibody, Detection Antibody, and Standard: data available
Streptavidin-HRP Conjugate: 6-7

| | |
|--|-------------------|
| Melting point/freezing point | no data available |
| Boiling point | no data available |
| Flash point | no data available |
| Ignition temperature | no data available |
| Autoignition temperature | no data available |
| Lower explosion limit | no data available |
| Upper explosion limit | no data available |
| Vapour pressure | no data available |
| Density | no data available |
| Water solubility | no data available |
| Partition coefficient: n-octanol/water | no data available |
| Relative vapour density | no data available |
| Odour | no data available |
| Odour Threshold | no data available |
| Evaporation rate | no data available |

10. STABILITY AND REACTIVITY

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: no data available

Conditions to avoid: Prolonged light exposure may affect product performance or quality.

Materials to avoid: Acidic material and metals and strong oxidizers. Sodium azide may react with metallic plumbing and form explosive metal azides.

Hazardous decomposition products: Other decomposition products - no data available

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11. TOXICOLOGICAL INFORMATION

Acute toxicity

| Ingredient name | Result | Species | Dose | Exposure |
|-----------------|---------------------|------------|-------------|----------|
| Sodium chloride | LD50 Dermal | Rabbit | 10000 mg/kg | - |
| | LD50 Oral | Rat | 3000 mg/kg | - |
| | LDLo Intra-arterial | Guinea Pig | 300 mg/kg | - |

To the best of our knowledge, the toxicological properties of this product have not been thoroughly investigated.

Skin corrosion/irritation

| Ingredient name | Result | Species | Score | Exposure | Observation |
|-----------------|--------------------------|---------|-------|----------------|-------------|
| Sodium chloride | Eyes – Moderate irritant | Rabbit | - | 24 hrs 100 mgs | - |
| | Eyes – Moderate irritant | Rabbit | - | 10 mgs | - |
| | Skin – Mild irritant | Rabbit | - | 24 hrs 500 mgs | - |

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available

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 a known or anticipated carcinogen by NTP.

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

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

no data available

Aspiration hazard: no data available

Potential health effects:

Inhalation May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion May be harmful if swallowed.
Skin May be harmful if absorbed through skin. May cause skin irritation.
Eyes May cause eye irritation.
Carcinogenicity None

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Reproductive toxicity None
Mutagenicity None
Sensitization None

Signs and Symptoms of Exposure

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

Synergistic effects: no data available

Additional Information: RTECS: Not available

12. ECOLOGICAL INFORMATION

Toxicity

| Ingredient name | Result | Species | Exposure |
|-----------------|-------------------------------------|--|----------|
| Sodium chloride | Acute EC50 2430000 µg/l Fresh water | Algae – Navicula seminulum | 96 hours |
| | Acute EC50 28.85 mg/dm3 Fresh water | Algae – Pseudokirchneriella subcapitata | 72 hours |
| | Acute EC50 519.6 mg/l Fresh water | Crustaceans – Cypris subglobosa | 48 hours |
| | Acute IC50 6.87 g/L Fresh water | Aquatic plants – Lemna minor | 96 hours |
| | Acute LC50 1661 mg/l Fresh water | Daphnia – Daphnia magna | 48 hours |
| | Acute LC50 1000000 µg/l Fresh water | Fish – Morone saxatilis – Larvae | 96 hours |
| | Chronic LC10 781 mg/l Fresh water | Crustaceans – Hyalella Azteca – Juvenile (Fledging, Hatchling, Weanling) | 3 weeks |
| | Chronic NOEC 6 g/L Fresh water | Aquatic plants – Lemna minor | 96 hours |
| | Chronic NOEC 0.314 g/L Fresh water | Daphnia – Daphnia pulex | 21 days |
| | Chronic NOEC 100 mg/l Fresh water | Fish – Gambusia holbrooki - Adult | 8 weeks |

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

13. DISPOSAL CONSIDERATIONS

Disposal method: Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

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14. TRANSPORT INFORMATION

DOT (US) Hazard class: Not dangerous goods
IMDG Hazard class: Not dangerous goods
IATA Hazard class: Not dangerous goods

15. REGULATORY INFORMATION

OSHA Hazards: No known OSHA hazards
SARA 302 Components This product is not regulated under Section 302 of SARA and 40 CFR Part 355.
SARA 313 Components (40 CFR Part 372): This product does not contain any of the substances on the Toxic Chemicals List in 40 CFR Part 372.

SARA 311/312 Hazards

| Ingredient name | % | Fire hazard | Sudden release of pressure | Reactive | Immediate (acute) health hazard | Delayed (chronic) health hazard |
|-----------------|---------|-------------|----------------------------|----------|---------------------------------|---------------------------------|
| Sodium chloride | 0.1-1.0 | No | No | No | Yes | No |

CERCLA Sections 102a/103 Hazardous Substances (40 CFR Part 302.4): This product is not reportable under 40 CFR Part 302.4

US Inventory/TSCA (Toxic Substances Control Act): Not listed on inventory

California Prop. 65 Components:

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Disclaimer: Not for Human Use

Further information

Copyright 2018 Tonbo Biosciences. License granted to make unlimited paper copies for internal use only. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Tonbo Biosciences and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.tonbobio.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.