rnol: ApoE4 (human) ELISA Kit

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component Description</th>
<th>Volume</th>
<th>Safety Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plate Coated with ApoE4 Ab</td>
<td>Contains Glycerol &lt;40%</td>
<td>12 strips x 8 wells</td>
</tr>
<tr>
<td>Assay Diluent Proprietary Buffer (contains BSA &gt;1%)</td>
<td>27 ml</td>
<td>See below</td>
</tr>
<tr>
<td>Wash Buffer A (10x) Proprietary Buffer</td>
<td>10 ml</td>
<td>No hazards</td>
</tr>
<tr>
<td>Wash Buffer B (10x) Proprietary Buffer</td>
<td>20 ml</td>
<td>No hazards</td>
</tr>
<tr>
<td>rh ApoE4 Standard (100 μg/ml) Liquid</td>
<td>3 x 8 μl</td>
<td>No hazards</td>
</tr>
<tr>
<td>Detection Antibody (100x) Liquid (contains Glycerol &gt;40%, BSA&gt;1%)</td>
<td>110 μl</td>
<td>See below</td>
</tr>
<tr>
<td>HRP Conjugate (100x) Liquid (contains Glycerol &gt;40%, BSA&gt;1%)</td>
<td>135 μl</td>
<td>See below</td>
</tr>
<tr>
<td>TMB Substrate Liquid</td>
<td>11 ml</td>
<td>No hazards</td>
</tr>
<tr>
<td>Stop Solution Contains Sulfuric Acid &gt;1%</td>
<td>11 ml</td>
<td>See below</td>
</tr>
<tr>
<td>Plate Sealer Plate Sealer</td>
<td>2</td>
<td>No hazards</td>
</tr>
</tbody>
</table>

NOTE: The safety data shown below is based on pure ingredients: The amounts in this kit are far less.

SECTION 3: HAZARDS IDENTIFICATION

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS Number</th>
<th>EC-No.</th>
<th>Molecular Weight</th>
<th>Chemical Formula</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol</td>
<td>56-81-5</td>
<td>200-289-5</td>
<td>92.09</td>
<td>HOCH2CH(OH)CH2OH</td>
<td>100%</td>
</tr>
<tr>
<td>Bovine Serum Albumin (BSA)</td>
<td>9048-46-8</td>
<td>232-936-2</td>
<td>--</td>
<td>--</td>
<td>100%</td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>7664-93-9</td>
<td>231-639-5</td>
<td>98.08</td>
<td>H2O4S</td>
<td>&lt;10%</td>
</tr>
</tbody>
</table>

Glycerol:
GHS Classification: Not a dangerous substance according to GHS
GHS Label elements, including precautionary statements
Pictogram: none
Signal word: none
Hazard statement(s): none
Precautionary statement(s): none
HMIS Classification
Health hazard: 0
Flammability: 1
Physical hazards: 0
NFPA Rating
Health Hazard: 0
Fire: 1
Reactivity Hazard: 0
Potential Health Effects
Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
SAFETY DATA SHEET
Cat# K4699-100 ApoE4 (human) ELISA Kit SDS DATE: Apr 17, 2020

Skin: May be harmful if absorbed through skin. May cause skin irritation.
Eyes: May cause eye irritation.
Ingestion: May be harmful if swallowed.

Bovine serum albumin (BSA):
Emergency Overview: Originates from USA where BSE has not been reported
OSHA Hazards: No known OSHA hazards
GHS Classification: Not a dangerous substance according to GHS

GHS Label elements, including precautionary statements
Pictogram: none
Signal word: none
Hazard statement(s): none
Precautionary statement(s): none

HMIS Classification
Health hazard: 0
Flammability: 0
Physical hazards: 0

NFPA Rating
Health Hazard: 0
Fire: 0
Reactivity Hazard: 0

Potential Health Effects
Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
Skin: May be harmful if absorbed through skin. May cause skin irritation.
Eyes: May cause eye irritation.
Ingestion: May be harmful if swallowed.

Sulfuric acid:
Emergency Overview
OSHA Hazards: Target organ effect, Corrosive
Target Organs: Teeth, Lungs

GHS Classification:
Corrosive to metals
Skin corrosion (Category 1A)
Serious eye damage (Category 1)
Acute aquatic toxicity (Category 3)

GHS Label elements, including precautionary statements
Pictogram:

Signal word: Danger
Hazard statement(s):
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
Precautionary statement(s):
P234 Keep only in original container.
P264 Wash skin thoroughly after handling.
P280 Wear eye protection/ face protection.
P280 Wear protective gloves.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P390 Absorb spillage to prevent material damage.
P406 Store in corrosive resistant stainless steel container with a resistant inner liner.

HMIS Classification
Health hazard: 3
Chronic health hazard: *
Flammability: 0
Physical hazards: 2

NFPA Rating
Health hazard: 3
Fire: 0
Reactivity hazard: 0
Special hazard: W

Potential Health Effects
Inhalation: May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin: May be harmful if absorbed through skin. Causes skin burns.
Eyes: Causes eye burns.
SECTION 4: FIRST AID MEASURES

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed: DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

SECTION 5: FIRE-FIGHTING MEASURES

Condition of flammability: Not flammable or combustible.

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

Special protective equipment for fire-fighters: Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

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.

Methods for cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling: Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Avoid inhalation of vapor or mist.

Conditions for safe storage: Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature: -20°C

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Glycerol:

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol</td>
<td>56-81-5</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>USA. OSHA – TABLE Z-1 Limits for Air Contaminants – 1910.1000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>USA. OSHA – TABLE Z-1 Limits for Air Contaminants – 1910.1000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
</tbody>
</table>

Remarks: Upper Respiratory Tract Irritation

Sulfuric acid:

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric acid</td>
<td>7664-93-9</td>
<td>TWA</td>
<td>0.2 mg/m³</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>1 mg/m³</td>
<td>USA. OSHA – Table Z-1 Limits for Air Contaminants – 1910.1000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>1 mg/m³</td>
<td>USA. Occupational Exposure Limits (OSHA) – Table Z-1 Limits for Air Contaminants</td>
</tr>
</tbody>
</table>

BSA:

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) 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).

Hand protection
SAFETY DATA SHEET

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SDS DATE: Apr 17, 2020

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
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).

Skin and body protection
Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Glycerol</th>
<th>BSA</th>
<th>Sulfuric acid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance:</td>
<td>Clear liquid</td>
<td>Lyophilized powder</td>
<td>Liquid</td>
</tr>
<tr>
<td>pH:</td>
<td>5.5-6</td>
<td>4.8-7.5</td>
<td>Soluble</td>
</tr>
<tr>
<td>Water Solubility:</td>
<td>Soluble</td>
<td>Slightly soluble</td>
<td>Soluble</td>
</tr>
<tr>
<td>Other Solubility:</td>
<td>No data available</td>
<td>No data available</td>
<td>290 °C (554 °F)</td>
</tr>
<tr>
<td>Boiling Point (°C):</td>
<td>182 °C (360 °F)</td>
<td>No data available</td>
<td>3 °C (37 °F)</td>
</tr>
<tr>
<td>Melting Point (°C):</td>
<td>20 °C (68 °F)</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash Point (°C):</td>
<td>160 °C (320 °F)</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Ignition Temperature (°C):</td>
<td>370 °C (698 °F)</td>
<td>No data available</td>
<td>1.84 g/cm³</td>
</tr>
<tr>
<td>Density:</td>
<td>1.25 g/ml</td>
<td>No data available</td>
<td>Sulfuric acid</td>
</tr>
</tbody>
</table>

SECTION 10: STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Glycerol</th>
<th>BSA</th>
<th>Sulfuric acid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical stability:</td>
<td>Stable under recommended storage conditions</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Conditions to avoid:</td>
<td>No data available</td>
<td>No data available</td>
<td>Bases, hydrides, organic materials, carbides, fulminates, nitrates, picrates, cyanides, chlorates, alkali halides, zinc salts, permanganates, hydrogen peroxide, azides, perchlorates, nitromethane, phosphorus. Reacts violently with: cyclopentadiene, cyclopentanone oxime, nitroaryl amines, hexalithium disilicide, phosphorus (III) oxides, powdered metals</td>
</tr>
<tr>
<td>Materials to avoid:</td>
<td>Strong bases, strong oxidizing agents</td>
<td>Strong oxidizing agents</td>
<td>No data available</td>
</tr>
<tr>
<td>Hazardous decomposition products:</td>
<td>Carbon oxides</td>
<td>No data available</td>
<td>Sodium oxides</td>
</tr>
</tbody>
</table>

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity: no data available
Skin corrosion/irritation: no data available
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.
  ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
  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
Specific target organ toxicity – single exposure (GHS): no data available
Specific target organ toxicity – repeated exposure (GHS): no data available
Aspiration hazard: no data available
Potential Health Effects
  Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
  Skin: May be harmful if absorbed through skin. May cause skin irritation.
Eyes: May cause eye irritation.

Ingestion: May be harmful if swallowed.

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: MA8050000

BSA:

Acute toxicity: no data available

Irritation and corrosion: 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.

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

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 (GHS): no data available

Specific target organ toxicity – repeated exposure (GHS): no data available

Potential Health Effects

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Skin: May be harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

Ingestion: May be harmful if swallowed.

Synergistic effects: no data available

Additional information: RTECS: not available

Sulfuric acid:

Acute toxicity: LD50 Oral – rat – 2,140 mg/kg

LC50 Inhalation – rat – 2 h – 510 mg/m³

Skin corrosion/irritation: Skin – rabbit – extremely corrosive and destructive to tissue

Serious eye damage/eye irritation: Eyes – rabbit – severe eye irritation

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available

Carcinogenicity: The International Agency for Research on Cancer (IARC) has determined that occupational exposure to strong-inorganic-acid mists containing sulfuric acid is carcinogenic to rats (Group 1).

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

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

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

Aspiration hazard: no data available

Potential Health Effects

Inhalation: May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Skin: May be harmful if absorbed through skin. Causes skin burns.

Eyes: Causes eye burns. Causes severe eye irritation.

Ingestion: May be harmful if swallowed.

Signs and Symptoms of Exposure: Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonia, pulmonary edema, burning sensation, cough, wheezing, laryngitis, shortness of breath, headache, nausea, vomiting, pulmonary edema. Effects may be delayed. 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: WS660000

SECTION 12: ECOLOGICAL INFORMATION

Glycerol & BSA:

Persistence and degradability: no data available

Toxicity: no data available

Bioaccumulative potential: no data available
Mobility in soil: no data available
PBT and vPvB assessment: no data available
Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life with long lasting effects.

SECTION 13: DISPOSAL CONSIDERATIONS

Product: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact licensed professional waste disposal service to dispose of this material. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as some components in this kit are highly flammable.
Contaminated packaging: Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

Glycerol & BSA:
DOT (US): Not dangerous goods.
IMDG: Not dangerous goods.
IATA: Not dangerous goods.

Sulfuric acid:
DOT (US): UN-number: 1830, Class: 8, Packing group: II; Proper shipping name: Sulfuric acid; Reportable Quantity (RQ): 1000 lbs.; Marine pollutant: No; Poison inhalation hazard: No
IMDG: UN-number: 1830, Class: 8, Packing group: II; EMS-No: F-A, S-B; Proper shipping name: SULFURIC ACID; Marine pollutant: No
IATA: UN-number: 1830, Class: 8, Packing group: II; Proper shipping name: Sulfuric acid

SECTION 15: REGULATORY INFORMATION

SARA 302 Components: The following components are subject to reporting levels established by SARA Title III, Section 302: Sulfuric acid, CAS-No. 7664-93-9; Revision Date: 2007-07-01
SARA 313 Components: The following components are subject to reporting levels established by SARA Title III, Section 313: Sulfuric acid, CAS-No. 7664-93-9; Revision Date: 2007-07-01
SARA 311/312 Hazards:
Glycerol: Chronic Health Hazard
Sulfuric acid: Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components: Sulfuric acid, CAS-No. 7664-93-9; Revision Date: 2007-07-01
Glycerol, CAS-No. 56-81-5; Revision Date: 2007-03-01

Pennsylvania Right To Know Components:
Glycerol, CAS-No. 56-81-5; Revision Date: 2007-03-01
Bovine Serum Albumin (BSA), CAS-No. 9048-46-8

Sulfuric acid, CAS-No. 7664-93-9; Revision Date: 2007-07-01

New Jersey Right To Know Components:
Glycerol, CAS-No. 56-81-5; Revision Date: 2007-03-01
Bovine Serum Albumin (BSA), CAS-No. 9048-46-8
Sulfuric acid, CAS-No. 7664-93-9; Revision Date: 2007-07-01

California Prop. 65 Components: WARNING: This product can expose you to chemicals including TMB, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

EU regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>Risk Phrases</th>
<th>Safety Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol</td>
<td>--</td>
<td>S24/25</td>
</tr>
<tr>
<td>BSA</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>Sulfuric acid</td>
<td>R35</td>
<td>S26, S30, S45</td>
</tr>
</tbody>
</table>

SECTION 16: OTHER INFORMATION:

DISCLAIMER:
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. BioVision, Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.