



## Safety Data Sheet

Product Name: Human TNF-alpha ELISpot Kit

Reviewed on: 25 May 2012

### 1. Identification of Substance:

- **Other means of identification: Catalog Number: EL210, XEL210, PEL210**  
Components: Microplate, Detection Antibody Concentrate (contains Proclin 300), Streptavidin-AP Concentrate A (contains Proclin 300 and Sodium azide), Dilution Buffer 1 (contains Proclin 300), Dilution Buffer 2 (contains Proclin 300), Wash Buffer Concentrate (contains Proclin 300), BCIP/NBT Chromogen (contains BCIP/NBT), Control (contains Sodium azide).
- **GHS product identifier:** Human TNF-alpha ELISpot Kit
- **Application of the substance / the preparation:** For Research Use Only
- **Manufacturer/Supplier:**  
R&D Systems Inc.  
614 McKinley Place N.E.  
Minneapolis, MN 55413 USA
- **For product related questions call:** 1-800-343-7475. In Europe call: +44(0)1235-529449.
- **Emergency information:** In case of a chemical emergency, spill, leak, fire, or accident call **CHEMTREC** at 1-800-424-9300 (US or Canada). Outside USA and Canada: +1 703-527-3887 (collect calls accepted).

### 2. Hazards Identification:

- **Classification: Regulation (EC) No 1272/2008 [EU-GHS/CLP]: BCIP/NBT Chromogen**

Acute Toxicity, Oral 3  
Acute Toxicity, Inhalation 3  
Acute Toxicity, Dermal 3  
STOT, Single Exposure, 2  
Flammable Liquid, 2  
Eye Irritation, 2A  
**Signal Word: DANGER**



- **Hazard Statements:** H301: Toxic if swallowed. H311: Toxic in contact with skin. H331: Toxic if inhaled. H371: May cause damage to organs. H225: Highly flammable liquid and vapour. H319: Causes serious eye irritation.
- **Precautionary Statements:** P264: Wash hands thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P280: Wear protective gloves/protective clothing/eye protection/face protection. P260: Do not breathe dust/fume/gas/mist/ vapours/spray. P271: Use only outdoors or in a well-ventilated area. P210: Keep away from heat/sparks/ open flames/hot surfaces. No smoking. P233: Keep container tightly closed. P241: Use explosion-proof electrical equipment. P242: Use only non-sparking tools. P243: Take precautionary measure against static discharge.

#### Responses:

IF SWALLOWED: Immediately call a Poison Control Center or physician. See specific treatment in this MSDS. Rinse mouth.  
IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/physician if you feel unwell. See specific treatment in this MSDS. Remove/take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Rinse skin with water/shower.  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician. See specific treatment in this MSDS.  
IF EXPOSED OR CONCERNED: Call a POISON CENTER or doctor/physician.  
IN CASE OF FIRE: Use alcohol resistant foam, carbon dioxide, or dry chemical to extinguish.

- **Classification according to EU Directives 67/548/EEC or 1999/45/EC:** Xn: Harmful. Xi: Irritant. F: Highly Flammable.
- **R-phrases:** R20/21/22: Harmful by inhalation, in contact with skin and if swallowed. R68/20/21/22: Harmful: possible risk of irreversible effect through inhalation, in contact with skin and if swallowed. R11: Highly flammable. R66: Repeated exposure may cause skin dryness or cracking. R67: Vapours may cause drowsiness and dizziness.
- **S-phrases:** S36/37: Wear suitable protective clothing and gloves. S16: Keep away from sources of ignition-No smoking. S45: In case of accident or if you feel unwell, seek medical advice immediately (show label if possible). S51: Use only in well-ventilated areas. S1/2: Keep locked up and out of reach of children. S7: Keep container tightly closed. S9: Keep container in a well ventilated place. S16: Keep away from sources of ignition – No smoking. S24/25: Avoid contact with skin



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and eyes. S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

- **Special Hazards:** none.

### 3. Information on Ingredients:

- **Description:** Methanol Solution

Contains	CAS No.	EC-No.	Index-No.	Content
Methanol	67-56-1	200-369-6	603-001-00-X	3 - 10%
Acetone	67-64-1	200-662-2	606-001-00-8	3 – 10%
Isopropyl Alcohol	67-63-0	200-661-7	603-117-00-0	3 – 10%

### 4. First Aid Measures:

- **After inhalation:** Move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
- **After skin contact:** Wash off with soap and plenty of water. Take victim immediately to a hospital. Consult a physician.
- **After eye contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Show this MSDS.
- **After swallowing:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Call a physician. Show this MSDS.
- **Most important symptoms and effects, both acute and delayed:** Unknown
- **Indication of any immediate medical attention and special treatment needed:** No data available

### 5. Fire Fighting Measures:

- **Suitable extinguishing agents:** Dry chemical, carbon dioxide, water spray or alcohol-resistant foam. Do not extinguish fire unless flow can be stopped. Use water in flooding quantities as fog. Solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water. Apply water from as far a distance as possible.
- **Special hazards arising from the substance or mixture:** Emits toxic fumes under fire conditions. Carbon oxides.
- **Protective equipment:** Wear self contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
- **Further information:** Use water spray to cool unopened containers.

### 6. Accidental Release Measures:

- **Personal precautions, protective equipment and emergency procedures:** Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate all personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
- **Environmental precautions:** Prevent further leakage or spillage is safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
- **Methods and materials for containment and cleaning up:** Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.

### 7. Handling and Storage:

- **Precautions for safe handling:** Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition – No Smoking. Take measures to prevent the buildup of electrostatic charge.
- **Conditions for safe storage, including incompatibilities:** Store locked up. Store in a cool place. Keep container tightly closed in a dry and well ventilated place.



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### 8. Exposure Controls and Personal Protection:

▪ **Control parameters:**

**Component:** Methanol: UK EH40 WEL Workplace Exposure Limits: STEL 250 ppm, 333 mg/m<sup>3</sup>. TWA 200 ppm, 266 mg/m<sup>3</sup>.

NIOSH REL: STEL 250 ppm, 325 mg/m<sup>3</sup>. TWA 200 ppm, 260 mg/m<sup>3</sup>.

Acetone: UK EH40 WEL Workplace Exposure Limits: STEL 1,500 ppm, TWA 750 ppm.

NIOSH REL: STEL 250 ppm, 590 mg/m<sup>3</sup>. TWA 21,000 ppm, 2,400 mg/m<sup>3</sup>.

Isopropyl Alcohol UK EH40 WEL Workplace Exposure Limits: STEL 1225 ppm, TWA 980 ppm.

NIOSH REL: STEL 500 ppm, 1,225 mg/m<sup>3</sup>. TWA 400 ppm, 980 mg/m<sup>3</sup>.

- **Appropriate engineering controls:** Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling product.

**Personal Protective Equipment:**

**Eye and Face Protection:** Tightly fitting safety goggles. Face shield (8-inch minimum).

**Skin 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.

**Body Protection:** Complete suit protection against chemicals, flame retardant antistatic protective clothing, 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 full-face respirator.

### 9. Physical and Chemical Properties:

- **Appearance:** Liquid
- **Odor:** Pungent odor
- **Odor threshold:** Not available
- **pH:** Not available
- **Melting point/freezing point:** Not available.
- **Partition coefficient: noctanol/water:** Not available
- **Flash point:** Not available
- **Water solubility:** Soluble
- **Evaporation rate:** Not available
- **Flammability (solid, gas):** Not available

**Upper/lower flammability or explosive limits:** Not available

**Vapor density :** Not available

**Vapor pressure:** Not available

**Relative density:** Not available

**Boiling point/Boiling range:** Not available

**Auto igniting:** Not available

**Decomposition temperature:** Not available

**Viscosity:** Not available

### 10. Stability and Reactivity:

- **Reactivity:** Strong oxidizers, alkalis and acids, phenols, urea, acetaldehyde, chlorine, ethylene oxide, isocyanates.
- **Chemical Stability:** Contains the following stabilizer: Methanol (>3 - <10%).
- **Possibility of hazardous reactions:** no data available.
- **Conditions to avoid:** Heat, flames, sources of ignition.
- **Incompatible materials:** Strong oxidizers, alkalis and acids, phenols, urea, acetaldehyde, chlorine, ethylene oxide, isocyanates.
- **Hazardous decomposition products:** no data available.

### 11. Toxicological Information:

▪ **Acute toxicity:**

Methanol: rat oral – LD50 = 6200 mg/kg; mouse oral – LD50 = 400 mg/kg.

Acetone: rat oral – LD50 = 9,800 mg/kg; mouse oral – LD50 = 3,000 mg/kg.

Isopropyl Alcohol – rat oral – LD50 = 4,420 mg/kg; mouse oral – LD50 = 4,800 mg/kg.



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- **Skin corrosion/irritation:**
  - Methanol: rabbit dermal – LD50 = 16,000 mg/kg.
  - Acetone: rabbit dermal - LD50 = 20 mg/kg
  - Isopropyl Alcohol: rabbit dermal 500 mg/24 hr (mild).
- **Serious eye damage/irritation:**
  - Methanol: no data available.
  - Acetone: rabbit eye – irritation after 24 hr.
  - Isopropyl Alcohol: rabbit eye 0.1 mL of 70% solution (severe eye irritation).
- **Respiratory or skin sensitization:**
  - Methanol: no data available
  - Acetone:
  - Isopropyl Alcohol: Causes respiratory irritation at 400 ppm. High concentrations are toxic.
- **Germ cell mutagenicity:** no data available.
- **Carcinogenicity:** no data available.
- **Reproductive toxicity:** no data available.
- **Specific target organ toxicity (STOT) -single exposure:**
  - Methanol: acute intoxication causes CNS depression as observed by narcosis, in coordination, lethargy, drowsiness and prostration. A latent period follows the initial intoxication in which formic acid accumulates in the body causing metabolic acidosis.
  - Acetone: pulmonary congestion, seizures, edema.
  - Isopropyl Alcohol: High concentrations cause nausea, headache, lightheadedness, drowsiness, ataxia and deep narcosis.
- **Specific target organ toxicity (STOT) -repeated exposure:** no data available.
- **Aspiration hazard:** No data available
- **Information on likely routes of exposure:** Routes of entry anticipated; oral, dermal, inhalation.
- **Symptoms related to the physical, chemical and toxicological characteristics:**
  - Inhalation:** Causes conjunctivitis, headache, giddiness, insomnia, gastric disturbances, bilateral blindness, nausea, headache, lightheadedness, drowsiness, ataxia and deep narcosis.
  - Ingestion:** Causes acute intoxication followed by a latent period of metabolic acidosis and severe abdominal, leg and back pain, followed by blindness.
  - Skin contact:** Irritation and redness.
  - Eye contact:** Causes serious eye irritation which can lead to blindness.
- **Delayed and immediate effects and also chronic effects from short and long term exposure:** Acute intoxication is manifested by signs of narcosis. This is followed by formic acid accumulation in the body causing metabolic acidosis. Severe abdominal pain and severe abdominal, leg and back pain, followed by blindness.

### 12. Ecological Information:

- **Ecotoxicity:**
  - Methanol: low acute toxicity to aquatic organisms. LD50 > 100 mg/L.
  - Acetone: *Oncorhynchus mykiss* (rainbow trout) LD50 = 5,540 mg/L/96 hr.
  - Isopropyl Alcohol: no data available.
- **Biodegradability:** Reacts with nitrogen dioxide in polluted atmospheres to product methyl nitrite. It is a volatile organic substance.
- **Bioaccumulative potential:** no data available.
- **Mobility in soil:** no data available.
- **Other adverse effects:** As a volatile organic compound, it can contribute to the formation of photochemical smog in the presences of other volatile organic compounds.

### 13. Disposal Considerations:

- **Disposal methods:** Dispose of waste in accordance to applicable national, regional, or local regulations. Contact a licensed professional waste disposal service to dispose of this material.
- **Contaminated packaging:** Dispose in the same manner as unused product.



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### 14. Transport Information:

#### ADR/RID ADN/ADNR IMDG IATA/DOT

ADR/DOT/:	UN Number:	UN 1992
RID	Proper Shipping Name:	Flammable liquid, toxic, n.o.s. (Methanol, Acetone, Isopropyl Alcohol)
	Hazard class:	3 (6.1)
	Packing group:	II
IATA:	UN Number:	UN 1992
	Proper Shipping Name:	Flammable liquid, toxic, n.o.s. (Methanol, Acetone, Isopropyl Alcohol)
	Hazard class:	3 (6.1)
	Packing group:	II
IMDG:	UN Number:	UN 1992
	Proper Shipping Name:	Flammable liquid, toxic, n.o.s. (Methanol, Acetone, Isopropyl Alcohol)
	Hazard class:	3 (6.1)
	Packing group:	II
	Marine Pollutant:	No

### 15. Regulations:

#### US Federal and State Regulations

**TSCA (Toxic Substances Control Act):** Methanol is listed. Acetone is listed. Isopropyl alcohol is listed.

**SARA 313:** Methanol is listed. Acetone is listed. Isopropyl alcohol is not listed.

**SARA 311/312 Hazards:** Methanol: Acute Health Hazard. Acetone: Acute Health Hazard. Isopropyl alcohol: Acute Health Hazard.

**CERCLA Reportable Quantity:** Methanol: 5,000 pounds. Acetone: 5,000 pounds. Isopropyl alcohol is not listed.

**California Proposition 65:** Methanol, Acetone and Isopropyl alcohol are not listed on California's listing of known or potential carcinogens.

### 16. Other Information:

- R-phrases:** R20/21/22: Harmful by inhalation, in contact with skin and if swallowed. R68/20/21/22: Harmful: possible risk of irreversible effect through inhalation, in contact with skin and if swallowed. R11: Highly flammable. R66: Repeated exposure may cause skin dryness or cracking. R67: Vapours may cause drowsiness and dizziness.
- S-phrases:** S36/37: Wear suitable protective clothing and gloves. S16: Keep away from sources of ignition-No smoking. S45: In case of accident or if you feel unwell, seek medical advice immediately (show label if possible). S51: Use only in well-ventilated areas. S1/2: Keep locked up and out of reach of children. S7: Keep container tightly closed. S9: Keep container in a well ventilated place. S16: Keep away from sources of ignition – No smoking. S24/25: Avoid contact with skin and eyes. S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- Notice to reader:** To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

### 2. Hazard Identification:

- Classification: Regulation (EC) No. 1272/2008 [CLP/GHS]**  
Some components indicated above contain Proclin 300: Skin Sens. 1; H317 – May cause an allergic skin reaction.
- Signal Word:** WARNING
- Precautionary statements:**  
P261: Avoid breathing mist.





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

P280: Wear protective gloves.

**Response:**

IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: get medical attention. Wash contaminated clothing before reuse.

- **Classification according to Directive 67/548/EEC:** The product is classified as a skin sensitizer according to Directive 1999/45/EC and its amendments.
- **Hazard Symbol / R-Phrase / S-Phrase:** R43: May cause sensitization by skin contact.
- **Other hazards:** none

### 3. Information on Ingredients:

**Description:** Proclin 300

Contains	CAS No.	EC-No.	Index-No.	Content
Modified Alkyl Carboxylate	-	-	-	<0.01%
Mixture of 5-Chloro-2-Methyl-4-Isothiazolin-3-One (26172-55-4) and -Methyl-4-Isothiazolin-3-One (2682-20-4)	55965-84-9	-	613-167-00-5	<0.01%
Modified Glycol	-	-	-	≤1.6%

### 4. First Aid Measures:

- **IF IN EYES:** Rinse thoroughly with water for at least 15 minutes and immediately consult a physician.
- **IF ON SKIN (or hair):** Immediately take off contaminated clothing or shoes. Wash with plenty of soap and water. Consult a physician.
- **IF INHALED:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
- **IF SWALLOWED:** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Immediately consult a physician.

### 5. Fire Fighting Measures:

- **Suitable extinguishing agents:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- **Special precautions for fire-fighters:** Self contained breathing apparatus and full protective clothing must be worn in case of fire.

### 6. Accidental Release Measures:

- **Person-related safety precautions:** Use appropriate personal protective equipment to prevent contamination of skin, eyes and personal clothing. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
- **Measures for environmental protection:** Keep away from drains.
- **Measures for containment and cleaning:** Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

### 7. Handling and Storage:

- **Precautions for safe handling:** Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use normal measures for preventive fire protection.
- **Conditions for safe storage:** Store in a cool, dry place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.



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### 8. Exposure Controls and Personal Protection:

- **Control parameters:** Contains no substances with occupational exposure limit values.
- **Individual protection measures:** Wash hands thoroughly after handling chemical products and before eating, smoking or using the toilet. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

**Eye/face protection:** Wear approved safety goggles.

**Skin/hand protection:** Handle with protective gloves, plastic or rubber. 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.

**Body protection:** Wear suitable protective clothing as protection against splashing or contamination.

**Other skin protection:** Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved.

**Respiratory protection:** In case of inadequate ventilation, use a suitable respirator. 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).

### 9. Physical and Chemical Properties:

- **Appearance:** Clear Liquid available
- **Odor:** Not available
- **Odor threshold:** Not available
- **pH:** Not available
- **Melting point/freezing point:** -40° C
- **Boiling point/Boiling range:** 189° C available
- **Flash point:** 118° C – closed cup
- **Evaporation rate:** Not available

**Upper/lower flammability or explosive limits:** Not available

**Vapor density :** Not available

**Vapor pressure:** Not available

**Relative density:** 1.03 g/cm<sup>3</sup>

**Solubility in/Miscibility with Water:**

**Partition coefficient: noctanol/water:** Not available

**Auto igniting:** Not available

**Decomposition temperature:** Not available

- **Flammability (solid, gas):** Not available

**Viscosity:** Not available

### 10. Stability and Reactivity:

- **Chemical Stability:** Stable under recommended storage conditions.
- **Conditions to avoid:** Strong oxidizing agents, reducing agents, Amines, Mercaptans
- **Hazardous decomposition products:** Hazardous decomposition products formed under fire conditions – Carbon oxides, nitrogen oxides (NOx), Sulphur oxides, Hydrogen chloride gas.

### 11. Toxicological Information:

- **Acute toxicity:** LD50 Oral – rat – 862 mg/kg  
LD50 Dermal – rabbit- 2800 mg/kg
- **Skin corrosion/irritation:** Can cause severe burns. Skin – rabbit – Corrosive
- **Serious eye damage/irritation:** Rabbit – Corrosive to eyes
- **Respiratory or skin sensitization:** May cause allergic skin reaction.
- **Germ cell mutagenicity:** No data available
- **Carcinogenicity:** No data available
- **Reproductive toxicity:** No data available
- **Specific target organ toxicity (STOT) -single exposure:** No data available
- **Specific target organ toxicity (STOT) -repeated exposure:** No data available
- **Aspiration hazard:** Can cause severe burns.
- **Information on likely routes of exposure:** Routes of entry anticipated; oral, dermal, inhalation.
- **Symptoms related to the physical, chemical and toxicological characteristics:**

**Inhalation:** Harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.



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**Ingestion:** Harmful if swallowed. Causes burns.

**Skin contact:** Harmful if absorbed through skin. Causes burns.

**Eye contact:** Causes eye burns.

▪ **Delayed and immediate effects and also chronic effects from short and long term exposure:**

**Short term exposure: Potential immediate effects:** Not available. **Potential delayed effects:** Not available.

**Long term exposure: Potential immediate effects:** Not available. **Potential delayed effects:** Allergic contact dermatitis.

▪ **Effects of chronic exposure:** Proclin 300 at levels greater than or equal to 0.1% is not identified as probable, possible or a confirmed human carcinogen by IARC.

▪ **Numerical measures of toxicity:** Not available

▪ **Other Information:** NA

### 12. Ecological Information:

- **Ecotoxicity:** No data available
- **Biodegradability:** No data available.
- **Bioaccumulative potential:** No data available.
- **Mobility in soil:** No data available.
- **Other adverse effects:** Toxic to aquatic organisms.

### 13. Disposal Considerations:

- **Disposal methods:** Dispose of waste in accordance to applicable national, regional, or local regulations.
- **Contaminated packaging:** Dispose in the same manner as unused product.
- **Special precautions:** Dispose of small amounts of spilled material as described in section 6. Large spills must be dealt with separately by qualified disposal personnel. Avoid dispersal of spilled material to soil, waterways, drains and sewers.

### 14. Transport Information:

- **UN Number:** None
- **DOT regulations:** · **Hazard class:** None
- **Land transport ADR/RID (cross-border):** Not regulated.
- **Maritime transport IMDG:** Not regulated.
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:** Not regulated.

**Transport/Additional information:** Not dangerous according to the above specifications.

### 15. Regulations:

▪ **EU Regulation (EC) No. 1907/2006 (REACH) Annex XIV:**

**List of substances subject to authorization Substances of very high concern:** None of the components are listed.

**Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles:** Not applicable.

- **Hazard Symbol / R-Phrase / S-Phrase:** R43 May cause sensitization by skin contact.

### 16. Other Information:

- **Notice to reader:** To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.



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### 2. Hazards Identification:

- **Classification:**
  - **Some components indicated above contain Sodium Azide:**  
According to the Regulation (EC) No1272/2008: **Chronic aquatic toxicity (Category 3).**  
According to European Directive 67/548/EEC as amended: Harmful if swallowed. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Label Elements:** Pictogram: none Signal Word: none
- **Hazard Statement(s):** H412 Harmful to aquatic life with long lasting effects.
- **Precautionary Statement(s):** P273 Avoid release to the environment.  
IF SWALLOWED: Wash gently with plenty of soap and water. Immediately call a POISON CONTROL Center or physician.  
IF ON SKIN: Remove immediately all contaminated clothing. Wash contaminated clothing before reuse. Call a POISON CONTROL center or physician.  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CONTROL center or physician.
- **Hazard Symbol(s):** Xn Harmful
- **R-phrase(s):** R22 Harmful if swallowed, R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **S-phrase(s):** S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.
- **Other Hazards:** Handle as if capable of transmitting infectious agents.
  - **Routes of exposure:** Inhalation, ingestion, skin

### 3. Information on Ingredients:

Contains	EINECS	CAS No.	Content %
Sodium Azide	247-852-1	26628-22-8	0.1 – 0.5%

### 4. First Aid Measures:

- **After inhalation:** Supply fresh air. If not breathing give artificial respiration. Consult a physician.
- **After skin contact:** Remove contaminated clothing. Immediately wash with soap and water and rinse thoroughly. Consult a physician if irritation persists.
- **After eye contact:** Rinse opened eye for several minutes under running water. Consult a physician.
  - **After swallowing:** Rinse mouth with water. Seek medical attention and appropriate follow-up. Never give anything by mouth to an unconscious person.

### 5. Fire Fighting Measures:

- **Suitable extinguishing agents:** Any means suitable for extinguishing the surrounding area.
- **Specific hazards arising from the chemical:** Dangerous decomposition is not anticipated.
- **Protective equipment:** Wear appropriate protective clothing and a self-contained breathing apparatus if necessary.

### 6. Accidental Release Measures:

- **Person-related safety precautions:** Avoid breathing vapors, mist or gas. Ensure adequate ventilation.
- **Measures for environmental protection:** Prevent further spillage or leakage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
- **Measures for containment and cleaning:**  
Absorb liquid components with inert liquid-binding material.  
Pick up mechanically.



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Dispose contaminated material as waste according to item 13.

### 7. Handling and Storage:

- **Precautions for safe handling:** Store in a well ventilated place. Keep container tightly closed.
- **Information about protection against explosions and fires:** Normal measures for preventive fire protection.
- **Conditions for safe storage:** None, according to product specifications. Store in a cool place. Keep container tightly closed in a dry and well ventilated place.

### 8. Exposure Controls and Personal Protection:

- **Components: Sodium Azide CAS-No.: 26628-22-8**  
**Value:** STEL CEIL: 0.29 mg/m<sup>3</sup> (NaN<sub>3</sub>) CEIL: 0.11 ppm (HN<sub>3</sub>) ; **UK. EH40 WEL- Workplace Exposure Limits:** Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity. **European Commission Directive 2000/39/EC:** Identifies the possibility of significant uptake through the skin indicative.  
**Value:** TWA 0.1 mg/m<sup>3</sup>; **UK. EH40 WEL- Workplace Exposure Limits:** Can be absorbed through the skin. The assigned substance are those for which there are concerns that dermal absorption will lead to systemic toxicity. **European Commission Directive 2000/39/EC:** Identifies the possibility of significant uptake through the skin indicative.
- **Appropriate engineering controls:** Follow usual standard laboratory practices. The following personal protection is recommended:  
**Respiratory Protection** – Respiratory Protection not required. For nuisance exposures use respirators and components approved under appropriate government standards.  
**Hand Protection** – Handle with gloves. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.  
**Eye Protection** – Use equipment for eye protection tested and approved under appropriate government standards.  
**Skin and Body Protection** – Use impervious clothing. 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 the workday.

### 9. Physical and Chemical Properties:

- **Appearance:** Undetermined
- **Odor:** Little to none.
- **pH:** Undetermined
- **Melting point/freezing point:** Undetermined
- **Boiling point/Boiling range:** Undetermined
- **Flash point:** Undetermined
- **Evaporation rate:** Undetermined
- **Flammability:** Undetermined
- **Vapor pressure/density:** Undetermined
- **Relative Density:** Undetermined
- **Solubility in/Miscibility with Water:** Soluble
- **Auto igniting:** Product is not self igniting.
- **Viscosity:** Undetermined

### 10. Stability and Reactivity:

- **Reactivity:** Sodium Azide can form explosive compounds with heavy metals which, with repeated contact with lead and copper commonly found in plumbing drains may result in the buildup of shock sensitive compounds.
- **Chemical Stability:** Stable under normal ambient and storage and handling temperatures.



## Safety Data Sheet

**Product Name: Human TNF-alpha ELISpot Kit**

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- **Thermal:** decomposition/conditions to be avoided: No decomposition if used according to specifications.
- **Incompatible materials to be avoided:** Metals and metallic compounds.
- **Hazardous decomposition products:** Hazardous decompositions formed under fire conditions. No dangerous decomposition products known.

### 11. Toxicological Information:

- **Acute toxicity:** Oral LD50 Oral: 27 mg/kg (mouse and rat); Inhalation LD50: 32 mg/m<sup>3</sup> (mouse) and 37 mg/m<sup>3</sup> (rat); Skin LD50: 20 mg/kg (rabbit) and 50 mg/kg (rat)
- **Skin corrosion / irritation:** May be harmful if absorbed through the skin. May cause skin irritation.
- **Serious eye damage / irritation:** May cause eye irritation.
- **Respiratory or skin sensitization:** No sensitizing effects known.
- **Germ cell mutagenicity:** No effect known.
- **Carcinogenicity:** No effect known.
- **Reproductive toxicity:** No toxic effect known.
- **STOT-single exposure:** Data not available
- **STOT-repeated exposure:** Data not available.
- **Aspiration hazard:** May be harmful if inhaled. May cause respiratory tract irritation.

Additional Information: RTECS: Not available

### 12. Ecological Information:

- **Ecotoxicity:** Harmful to aquatic life. LC50, 96 Hrs, Fish *Lepomis macrochirus* - 0.68 mg/L; EC50, 48 Hrs, *Daphnia pulex* - 4.2 mg/L
- **Persistence and degradability:** No data available
- **Bioaccumulative potential:** No data available
- **Mobility in soil:** Sodium azide is soluble in water.
- **Other adverse effects:** Sodium azide is toxic to aquatic organisms and may cause long term adverse effects in the aquatic environment. However, at the concentrations present this product does not need to be classified as hazardous for the environment and the effects are not expected to be significant.

### 13. Disposal Considerations:

- **Disposal methods:** Dispose of waste in accordance to applicable national, regional, or local regulations. Contact a licensed professional waste disposal service to dispose of this material.
- **Contaminated packaging:** Dispose of as unused product.

### 14. Transport Information:

- **ADR/RID** UN-Number: 3082 Class: 9 Packing Group: III  
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
- **IMDG** UN-Number: 3082 Class: 9 Packing Group: III EMS-No.: F-A, S-F  
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
Marine Pollutant: Marine Pollutant
- **IATA** UN-Number: 3082 Class: 9 Packing Group: III  
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

**Further Information:** Excepted quantity for single packagings and combination packagings containing inner packagings with Dangerous Goods < 30 mL for Liquids or < 30 kg for solids.



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### 15. Regulations:

#### US Federal and State Regulations

- **CERCLA/SARA 302:** Sodium Azide is listed.
- **CERCLA/SARA 304:** Sodium Azide is listed.
- **SARA 313:** Sodium Azide is listed.
- **TSCA (Toxic Substances Control Act):** Sodium Azide is listed.
- **California Proposition 65:** Sodium Azide is not listed on California's listing of known or potential carcinogens.

#### EU Labeling Classification

This product is not classified.

### 16. Other Information:

Text of H-codes and R-phrases in Section 3:

H300	Fatal if swallowed
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
EUH032	Contact with acids liberates very toxic gas.
T+	Very toxic
N	Dangerous for the environment
R28	Very toxic if swallowed
R32	Contact with acids liberates very toxic gas.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.