RayBiotech Empowering your proteomics

SAFETY DATA SHEET

Version 3.0 Revision Date 6/27/2017

1. IDENTIFICATION

Product Identification

Product Name Human TGF beta Phosphorylation Array C1

Catalog Number AAH-TGFb-1

Usage

This product is furnished for LABORATORY RESEARCH USE ONLY. Not for diagnostic or therapeutic use.

Supplier Identification

Company RayBiotech, Inc.

3607 Parkway Lane, Suite 100

Norcross, GA 30092

USA

Telephone 1-888-494-8555 (Toll Free); 770-729-2992

Fax 770-206-2393

Website www.RayBiotech.com
Email info@raybiotech.com

Emergency Telephone Number

Emergency Phone # 1-888-494-8555

2. HAZARDS IDENTIFICATION

Hazardous Ingredients

- 1. The 2X Cell Lysis Buffer contains Triton-X-100.
- 2. The Protease Inhibitor Cocktail Set I contains AEBSF, Hydrochloride; Leupeptin, Hemisulfate.
- 3. The Phosphatase Inhibitor Set II contains Sodium Fluoride, Sodium Molybdate, and Sodium Orthovanadate.

OSHA/HCS status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

Triton-X-100 (lysis buffer): Acute Toxicity

AEBSF (protease inhibitor set I): Acute Toxicity

Leupeptin (protease inhibitor set I): Acute Toxicity

Sodium Fluoride (phosphatase inhibitor set II): Acute Toxicity

Sodium Molybdate (phosphatase inhibitor set II): Acute Toxicity

Sodium Orthovanadate (phosphatase inhibitor set II): Acute Toxicity

GHS Label Elements

Hazard Pictograms

(

Signal Word/s

Warning

Triton-X-100 (lysis buffer): Harmful if swallowed; Risk of serious damage to

eyes; Irritating to skin.

AEBSF (protease inhibitor set I): Harmful if swallowed; Irritating to eyes and

skin.

Leupeptin (protease inhibitor set I): Harmful if swallowed or inhaled; Irritating

to eyes and skin.

Sodium Fluoride (phosphatase inhibitor set II): Harmful if swallowed; Irritating

to eyes and skin.

Sodium Molybdate (phosphatase inhibitor set II): Irritating to eyes.

Sodium Orthovanadate (phosphatase inhibitor set II): Harmful if swallowed;

Irritating to skin.

IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel

unwell.

EYE CONTACT: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.

SKIN CONTACT: Wash with clean water or soap and water.

INHALATION: Move to an outside area and breath fresh air. Clear the noseby

blowing.

Storage Not applicable.

Disposal Not applicable.

Hazards not otherwise classified

None known.

Response

Hazard Statements

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS Numbers/other identifiers

Ingredient Name	<u>%</u>	CAS Number
Triton-X-100	1-3	9002-93-1
AEBSF	1-3	30827-99-7
Leupeptin	1-5	103476-89-7
Sodium Fluoride	0.1-1	7681-49-4
Sodium Molybdate	1-5	7631-95-0
Sodium Orthovanadate	1-5	13721-39-6

Any percentage shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. FIRST-AID MEASURES

Description of Necessary First Aid Measures

Eye Contact	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
Skin Contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing and clean shoes before reuse.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Ingestion	Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Over-Exposure Signs/Symptoms

No specific data.

Notes to Physician

Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific Treatments

No specific treatment

Protection of First-Aiders

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

5. **FIRE FIGHTING MEASURES**

Use an extiguishing agent suitable for the surrounding fire, such as water **Extinguishing Media**

spray, carbon dioxide, dry chemical power or appropriate foam. Prevent

contact with skin and eyes.

In a fire or if heated, a pressure increase will occur and the component Chemical Hazards from Fire

containers may burst.

ACCIDENTAL RELEASE MEASURES 6.

Personal Precautions, Protective Equipment and Emergency Procedures

For Non- Emergency Personnel	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.	
For Emergency Responders	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For Non-Emergency Personnel" above.	
Environmental Precautions	Il sewers, Inform the relevant authorities if the product has caused environmental pollution	
Protective Equipment	II Wear respirator, chemical satety goddles, rubber boots and rubber gloves	

Methods and Materials for Containment and Cleaning Up

Small Spill	Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large Spill	Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. STORAGE AND HANDLING

Storage

Store the entire kit frozen at -20°C upon arrival.

Handling

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Permissible Exposure Limits (PELs)

This product does not contain any hazardous materials with occupational exposure limits established by theregion specific regulatory bodies.

Appropriate Engineering Controls

Showers Eyewash stations Ventilation systems

Protective Equipment

Wear suitable protective clothing, including gloves, safety glasses, dust mask, and a laboratory coat.

Special Precautions

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Clear, colorless

Odor Odorless **Physical State** Liquid pΗ N/A **Boiling Point** N/A Melting Point N/A N/A Freezing Point N/A Vapor Pressure Vapor Density N/A Specific Gravity N/A **Evaporation Rate** N/A Solubility in Water N/A Odor Threshold N/A Coefficient of Water/Oil Distribution N/A

10. STABILITY AND REACTIVITY

Chemical Stability Stable under normal handling procedures.

Hazardous Reactions Under normal conditions of storage and use, hazardous reactions will not

occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Ingredient Name	Result	Species	Dose
Triton-X-100	LD50	Oral rat female Oral rat male	707 mg/kg 2140 mg/kg
Sodium Fluoride	LD50	Oral rat Oral mice	31 mg/kg 44 mg/kg
Sodium Molybdate	LD50	Oral rat	4 g/kg
Sodium Orthovanadate	LD50	Oral rat	330 mg/kg

Carcinogenicity Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65;

SensitizationNot AvailableMutagenicityNot availableReproductive ToxicityNot Available

Specific target organ toxicity

(single exposure)

Not available

Specific target organ toxicity

(repeated exposure)

Aspiration hazard

Not available

Not available

Likely routes of exposure Routes of entry anticipated: Oral, Dermal, Inhalation.

Potential acute health effects

Triton-X-100 (lysis buffer): Risk of serious damage to eyes.

AEBSF (protease inhibitor set I): Eye irritant. Leupeptin (protease inhibitor set I): Eye irritant.

Sodium Fluoride (phosphatase inhibitor set II): Eye irritant. Sodium Molybdate (phosphatase inhibitor set II): Eye irritant.

Inhalation Leupeptin (protease inhibitor set I): Harmful if inhaled.

AEBSF (protease inhibitor set I): Harmful if swallowed. Leupeptin (protease inhibitor set I): Harmful if swallowed.

Ingestion Leupeptin (protease inhibitor set I): Harmful if swallowed.

Sodium Fluoride (phosphatase inhibitor set II): Harmful if swallowed. Sodium Orthovanadate (phosphatase inhibitor set II): Harmful if swallowed.

Triton-X-100 (lysis buffer): Skin irritant.

AEBSF (protease inhibitor set I): Skin irritant.

Skin Contact Leupeptin (protease inhibitor set I): Skin irritant.

Sodium Fluoride (phosphatase inhibitor set II): Skin irritant. Sodium Orthovanadate (phosphatase inhibitor set II): Skin irritant.

12. ECOLOGICAL INFORMATION

Eye contact

Ecotoxicity

Persistence and degradability

Bioaccumulation/accumulation

Mobility in environmental media

No data available

No data available

Other hazardous effects May be harmful to the environment, particularly aquatic organisms.

13. DISPOSAL CONSIDERATIONS

Disposal should be in accordance with applicable national, state, and local laws and regulations. Local regulations may be more stringent than national or state requirements. Verify local and state regulations before discharging into public sewers or landfills. Do not dump into any body of water. Contact a licensed professional waste disposal service for appropriate methods of disposal.

14. TRANSPORT INFORMATION

Disposal methods

DOT Not dangerous goods.

IATA Not dangerous goods.

ADR Not dangerous goods.

15. REGULATORY INFORMATION

United States (TSCA) All ingredients are on the inventory or exempt from listing.

Canada (DSL / NDSL) All ingredients are on the inventory or exempt from listing.

SARA 302 Components

Triton-X-100 (lysis buffer): CAS 9002-93-1

SARA 313 Components

Triton-X-100 (lysis buffer): Concentration <3%

SARA 311/312 Hazards No known hazards.

California Prop. 65 Components This product does not contain any Proposition 65 chemicals.

16. OTHER INFORMATION

The above information was obtained from sources available at the time of revision and believed to be accurate and reliable. The information included is

Disclaimer not intended to be all inclusive and should only be used as a guide.

RayBiotech shall not be held liable for any damage resulting from use,

handling, or contact with the above product.

Last Revised 6/27/2017

