SAFETY DATA SHEET

Version 7.0
Revision Date June 14, 2021

1. IDENTIFICATION

Product Identification

Product Name	Rat TIMP-1 ELISA Kit (For Lysates)
Catalog Number	ELR-TIMP1-CL

Kit Components

Component	Size / Description
TIMP-1 Microplate (Item A)	96 wells (12 strips x 8 wells) coated with anti-Rat TIMP-1.
Wash Buffer Concentrate (20X) (Item B)	25 ml of 20X concentrated solution.
Standard Protein (Item C)	2 vials of Rat TIMP-1. 1 vial is enough to run each standard in duplicate.
Detection Antibody TIMP-1 (Item F)	2 vials of biotinylated anti-Rat TIMP-1. Each vial is enough to assay half the microplate.
HRP-Streptavidin Concentrate (Item G)	200 µl 400X concentrated HRP-conjugated streptavidin.
TMB One-Step Substrate Reagent (Item H)	12 ml of 3,3,5,5'-tetramethylbenzidine (TMB) in buffer solution.
Stop Solution (Item I)	8 ml of 0.2 M sulfuric acid.
Sample Diluent Buffer (Item D2)	10 ml of 5X concentrated buffer.
Assay Diluent (Item E2)	15 ml of 5X concentrated buffer.
Lysis Buffer (Item J)	5 ml of 2X cell lysate buffer.

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 200 Peachtree Corners, 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. Stop Solution contains Sulfuric Acid
2. Lysis Buffer contains Triton-X-100.

OSHA/HCS status

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

Classification of the substance or mixture

Sulfuric Acid (Stop Solution): Causes skin irritation (H315); Causes serious eye irritation (H319)
Triton-X-100 (Lysis Buffer): Skin Corr./Irrit. 1A (H314); Acute Oral Toxicity

GHS Label Elements

Hazard Pictograms	
Signal Word	Warning
Hazard Statements	Sulfuric Acid (Stop Solution): Causes skin irritation (H315); Causes serious eye irritation (H319) Triton-X-100 (Lysis Buffer): Causes skin irritation (H315); Causes serious eye irritation (H319); Harmful if swallowed (H302)
Prevention	Wear protective gloves, protective clothing, eye protection, face protection. Wash exposed skin thoroughly after handling.
Response	IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Storage	Not applicable.
Disposal	Dispose of contents/container to comply with local, state and federal regulations.

Hazards not otherwise classified

None known.

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3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/Mixture	Item A is substance. All other items are mixture.
Other means of identification	Not available

CAS Numbers/other identifiers

Ingredient Name	%	CAS Number
Sulfuric Acid	1-3	7664-93-9
Triton-X-100	1-3	9002-93-1

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.

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4. FIRST-AID MEASURES

Description of Necessary First Aid Measures

Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
Skin Contact	Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER/doctor.
Inhalation	Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
Ingestion	Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

Potential Acute Health Effects

Eye Contact	Sulfuric Acid (Stop Solution): Causes serious eye damage (H319) Triton-X-100 (Lysis Buffer): Causes serious eye irritation (H319)
Skin Contact	Sulfuric Acid (Stop Solution): Causes skin irritation (H315) Triton-X-100 (Lysis Buffer): Causes skin irritation (H315)
Inhalation	No known significant effects or critical hazards.
Ingestion	Triton-X-100 (Lysis Buffer): Harmful if swallowed (H302)

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

Extinguishing Media	Use an extiguishing agent suitable for the surrounding fire, such as water spray, carbon dioxide, dry chemical power or appropriate foam. Prevent contact with skin and eyes.
Chemical Hazards from Fire	In a fire or if heated, a pressure increase will occur and the component containers may burst.

6. ACCIDENTAL RELEASE MEASURES

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	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Protective Equipment	Wear respirator, chemical safety goggles, 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

May be stored for up to 6 months at 2° to 8°C from the date of shipment. Opened Microplate Wells or reagentsmay be store for up to 1 month at 2° to 8°C. Return unused wells to the pouch containing desiccant pack, reseal along entire edge. Reconstituted standard can be stored at -80°C for up to 1 week. Note: the kit can be used within one year if the whole kit is stored at -20°C. Avoid repeated freeze-thaw cycles.

Handling

Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. Keep away from incompatible materials (see Section 10) and food and drink.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Permissible Exposure Limits (PELs)

Substance	CAS No.	Regulatory Limits		Recommended Limits	
		OSHA PEL	Cal/OSHA PEL	NIOSH REL	ACGIH
		mg/m3	8-hour TWA (ST) STEL (C) Ceiling	Up to 10-hour TWA (ST) STEL (C) Ceiling	8-hour TWA (ST) STEL (C) Ceiling
Sulfuric acid	7664-93-9	1	0.1 mg/m3 (ST) 3 mg/m3	1 mg/m3	0.2 mg/m3 (Thor.)

Appropriate Engineering Controls

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineeringcontrols to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Protective Equipment

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

Special Precautions

Not for human or drug use. Not for household use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear, colorless
Odor	Odorless
Physical State	Liquid
pH	N/A
Boiling Point	N/A
Melting Point	N/A
Freezing Point	N/A
Vapor Pressure	N/A
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	Exposure
Sulfuric Acid	LC50 Inhalation Gas LD50 Oral	Rat Rat	347 ppm 2140 mg/kg	1 hour -
Triton-X-100	LD50	Oral rat female Oral rat male	707 mg/kg 2140 mg/kg	-

Irritation/Corrosion

Ingredient Name	Result	Species	Exposure	Observation
Sulfuric Acid	Eyes - Severe irritant Eyes - Severe irritant	Rabbit Rabbit	250 Micrograms 0.5 minutes 5 milligrams	- -

Sensitization Not Available

Mutagenicity Not available

Classification

Ingredient Name	OSHA	IARC	NTP
Sulfuric Acid	+	1	Known to be a human carcinogen.

Reproductive Toxicity Not Available

Specific target organ toxicity (single exposure) Not available

Specific target organ toxicity (repeated exposure) Not available

Aspiration hazard Not available

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

Potential acute health effects

Eye contact Triton-X-100 (lysis buffer) & Sulfuric Acid (stop solution): Risk of serious damage to eyes.

Inhalation No known significant effects or critical hazards.

Ingestion Triton-X-100 (lysis buffer): Harmful if ingested

Skin Contact Triton-X-100 (lysis buffer) & Sulfuric Acid (stop solution): Skin irritant or corrosion.

12. ECOLOGICAL INFORMATION

Ecotoxicity No data available

Persistence and degradability No data available

Bioaccumulation/accumulation No data available

Mobility in environmental media No data available

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

13. DISPOSAL CONSIDERATIONS

Disposal methods 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

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.
	Europe	In accordance with Regulation (EC) No. 1907/2006 of the European Parliament and the Council (REACH) and Commission Regulation (EU) No. 830/2015. In accordance with Regulation (EC) No 1272/2008 - classification, labelling and packaging of substances and mixtures (CLP)
	SARA 302 Components	Sulfuric Acid (Stop Solution): CAS 7664-93-9 Triton-X-100 (Lysis Buffer): CAS 9002-93-1
	SARA 313 Components	Sulfuric Acid (Stop Solution): Concentration <3% Triton-X-100 (Lysis Buffer): Concentration <3%
	SARA 311/312 Hazards	Sulfuric Acid (Stop Solution): Health hazard - Skin corrosion or Irritation Health hazard - Serious eye damage or eye irritation Triton-X-100 (Lysis Buffer): Health hazard - Skin corrosion or Irritation Health hazard - Serious eye damage or eye irritation
	California Prop. 65 Components	Sulfuric Acid (Stop Solution): WARNING: This product contains a chemical known to the State of California to cause cancer.
16.	**OTHER INFORMATION**	
	Disclaimer	The above information was obtained from sources available at the time of revision and believed to be accurate and reliable. The information included is 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	June 14, 2021

This product is for research use only.