

Hazard Overview

Version 9.1
Revision Date 08/11/2026
Print Date 08/12/2026

SECTION 1. IDENTIFICATION

1.1 Product identifiers

Product name : Porcine Tumor Necrosis Factor α ELISA Kit

Product Number : RAB0478

Brand : Sigma

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Laboratory chemicals, Synthesis of substances

Restrictions on use : The product is being supplied under the TSCA R&D Exemption (40 CFR Section 720.36). It is the recipient's responsibility to comply with the requirements of the R&D exemption. The product may not be used for a non-exempt commercial purpose under TSCA unless appropriate consent is granted in writing by MilliporeSigma.

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich Inc.
SPRUCE ST 3050
63103 St. Louis

Telephone : (314) 771-5765

Telefax: (800) 325-5052

1.4 Emergency telephone number

Emergency Phone # : 800 424 9300 (CHEMTREC) 24/7
+1 703 527 3887 (CHEMTREC) 24/7

This is a summary SDS for a kit. For the full SDS for each of the components listed in section 16 please visit our website.

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SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Hazards for the product as supplied

Corrosive to metals : Category 1

Carcinogenicity : Category 2

Other hazards

None known.

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H290 May be corrosive to metals.
H351 Suspected of causing cancer.

Precautionary statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P234 Keep only in original packaging.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P390 Absorb spillage to prevent material damage.

Storage:

P405 Store locked up.
P406 Store in a corrosion resistant container with a resistant inner liner.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Please refer to component Safety Data Sheet and/or to Section 16 Kit components

SECTION 4. FIRST AID MEASURES

Refer to component SDS

SECTION 5. FIREFIGHTING MEASURES

Refer to component SDS

SECTION 6. ACCIDENTAL RELEASE MEASURES

Refer to component SDS

SECTION 7. HANDLING AND STORAGE

For precautions see section 2 GHS label elements

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

No metal containers.

Further information on storage conditions : Tightly closed.

Storage class : 10, Combustible liquids

Recommended storage temperature : -4 °F / -20 °C

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Refer to component SDS

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Refer to component SDS

SECTION 10. STABILITY AND REACTIVITY

Refer to component SDS

SECTION 11. TOXICOLOGICAL INFORMATION

Refer to component SDS

SECTION 12. ECOLOGICAL INFORMATION

Refer to component SDS

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SECTION 13. DISPOSAL CONSIDERATIONS

Refer to component SDS

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

UN/ID No. : UN 3264
Proper shipping name : Corrosive liquid, acidic, inorganic, n.o.s.
(sulphuric acid)
Class : 8
Packing group : III
Labels : Class 8 - Corrosive substances
Packing instruction (cargo aircraft) : 856
Packing instruction (passenger aircraft) : 852

IMDG-Code

UN number : UN 3264
Proper shipping name : CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
(sulphuric acid)
Class : 8
Packing group : III
Labels : 8
EmS Code : F-A, S-B
Marine pollutant : no

Transport in bulk according to IMO instruments

Not applicable for product as supplied.

National Regulations

49 CFR

UN/ID/NA number : UN 3264
Proper shipping name : Corrosive liquid, acidic, inorganic, n.o.s.
(sulphuric acid)
Class : 8

Packing group : III
Labels : Class 8 - Corrosive substances
ERG Code : 154
Marine pollutant : no
Poison Inhalation Hazard : No

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
ELISA Stop Solution (Item I)	7664-93-9		50000

SARA 304 Extremely Hazardous Substances Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
ELISA Stop Solution (Item I)	7664-93-9		50000

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

Components	CAS-No.	Component TPQ (lbs)
Lyophilized Porcine TNF- α Protein Standard (Item C)	Not Assigned	
20X Wash Buffer (Item B)	Not Assigned	
HRP-Streptavidin (Item G)	Not Assigned	
ELISA Colorimetric TMB Reagent (HRP Substrate, Item H)	Not Assigned	
ELISA Stop Solution (Item I)	7664-93-9	
ELISA 1X Assay/Sample Diluent Buffer C (Item L)	Not Assigned	
ELISA 5X Assay/Sample Diluent Buffer B (Item E1)	Not Assigned	

SARA 311/312 Hazards : Acute Health Hazard
Chronic Health Hazard

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

Warning: Manufactured with ELISA Stop Solution (Item I), ELISA 1X Assay/Sample Diluent Buffer C (Item L), a substance which harms public health and environment by destroying ozone in the upper atmosphere.

40 CFR Protection of Environment; Part 82 : 7664-93-9
Protection of Stratospheric Ozone -
CAA Section 602 Class I Substances
Ozone-Depletion Potential

40 CFR Protection of :
 Environment; Part 82
 Protection of
 Stratospheric Ozone -
 CAA Section 602 Class I
 SubstancesOzone-
 Depletion Potential

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

The following chemical(s) are listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F):

ELISA Stop Solution	7664-93-9	>= 90 - <= 100 %
(Item I)		
ELISA 1X	Not Assigned	>= 90 - <= 100 %
Assay/Sample Diluent		
Buffer C (Item L)		

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

ELISA Stop Solution	7664-93-9	>= 90 - <= 100 %
(Item I)		
ELISA 1X	Not Assigned	>= 90 - <= 100 %
Assay/Sample Diluent		
Buffer C (Item L)		

Clean Water Act

The following Hazardous Substances are listed under the U.S. Clean Water Act, Section 311, Table 116.4A:

ELISA Stop Solution	7664-93-9	>= 90 - <= 100 %
(Item I)		
ELISA 1X	Not Assigned	>= 90 - <= 100 %
Assay/Sample Diluent		
Buffer C (Item L)		

The following Hazardous Chemicals are listed under the U.S. Clean Water Act, Section 311, Table 117.3:

ELISA Stop Solution	7664-93-9	>= 90 - <= 100 %
(Item I)		
ELISA 1X	Not Assigned	>= 90 - <= 100 %
Assay/Sample Diluent		
Buffer C (Item L)		

This product contains the following toxic pollutants listed under the U.S. Clean Water Act Section 307

ELISA Stop Solution	7664-93-9	>= 90 - <= 100 %
(Item I)		
ELISA 1X	Not Assigned	>= 90 - <= 100 %
Assay/Sample Diluent		
Buffer C (Item L)		

This product contains the following priority pollutants related to the U.S. Clean Water Act:

ELISA Stop Solution	7664-93-9	>= 90 - <= 100 %
(Item I)		

ELISA 1X	Not Assigned	>= 90 - <= 100 %
Assay/Sample Diluent		
Buffer C (Item L)		

US State Regulations

Massachusetts Right To Know

Lyophilized Porcine TNF- $\hat{I}\pm$ Protein Standard (Item C)	Not Assigned
20X Wash Buffer (Item B)	Not Assigned
HRP-Streptavidin (Item G)	Not Assigned
ELISA 5X Assay/Sample Diluent Buffer B (Item E1)	Not Assigned
ELISA Colorimetric TMB Reagent (HRP Substrate, Item H)	Not Assigned
ELISA Stop Solution (Item I)	7664-93-9
ELISA 1X Assay/Sample Diluent Buffer C (Item L)	Not Assigned

Pennsylvania Right To Know

Lyophilized Porcine TNF- $\hat{I}\pm$ Protein Standard (Item C)	Not Assigned
20X Wash Buffer (Item B)	Not Assigned
HRP-Streptavidin (Item G)	Not Assigned
ELISA 5X Assay/Sample Diluent Buffer B (Item E1)	Not Assigned
ELISA Colorimetric TMB Reagent (HRP Substrate, Item H)	Not Assigned
ELISA Stop Solution (Item I)	7664-93-9
ELISA 1X Assay/Sample Diluent Buffer C (Item L)	Not Assigned

Maine Chemicals of High Concern

Lyophilized Porcine TNF- $\hat{I}\pm$ Protein Standard (Item C)	Not Assigned
20X Wash Buffer (Item B)	Not Assigned
HRP-Streptavidin (Item G)	Not Assigned
ELISA 5X Assay/Sample Diluent Buffer B (Item E1)	Not Assigned
ELISA Colorimetric TMB Reagent (HRP Substrate, Item H)	Not Assigned
ELISA Stop Solution (Item I)	7664-93-9
ELISA 1X Assay/Sample Diluent Buffer C (Item L)	Not Assigned

Vermont Chemicals of High Concern

Lyophilized Porcine TNF- $\hat{I}\pm$ Protein Standard (Item C)	Not Assigned
20X Wash Buffer (Item B)	Not Assigned
HRP-Streptavidin (Item G)	Not Assigned
ELISA Colorimetric TMB Reagent (HRP Substrate, Item H)	Not Assigned
ELISA Stop Solution (Item I)	7664-93-9
ELISA 1X Assay/Sample Diluent Buffer C (Item L)	Not Assigned
ELISA 5X Assay/Sample Diluent Buffer B (Item E1)	Not Assigned

Washington Chemicals of High Concern

Lyophilized Porcine TNF- $\hat{I}\pm$ Protein Standard (Item C)	Not Assigned
20X Wash Buffer (Item B)	Not Assigned
HRP-Streptavidin (Item G)	Not Assigned
ELISA Colorimetric TMB Reagent (HRP Substrate, Item H)	Not Assigned
ELISA Stop Solution (Item I)	7664-93-9
ELISA 1X Assay/Sample Diluent Buffer C (Item L)	Not Assigned

The components of this product are reported in the following inventories:

US TSCA : All substances listed as active on the TSCA inventory

TSCA list

The following substance(s) is/are subject to a Significant New Use Rule:

Lyophilized Porcine TNF- $\hat{I}\pm$	Not Assigned
Protein Standard (Item C)	
20X Wash Buffer (Item B)	Not Assigned
HRP-Streptavidin (Item G)	Not Assigned
ELISA Colorimetric TMB	Not Assigned
Reagent (HRP Substrate, Item H)	
ELISA Stop Solution (Item I)	7664-93-9
ELISA 1X Assay/Sample Diluent Buffer C (Item L)	Not Assigned
ELISA 5X Assay/Sample Diluent Buffer B (Item E1)	Not Assigned

The following substance(s) is/are subject to TSCA 12(b) export notification requirements:

Lyophilized Porcine TNF- $\hat{I}\pm$	Not Assigned
Protein Standard (Item C)	
20X Wash Buffer (Item B)	Not Assigned
HRP-Streptavidin (Item G)	Not Assigned
ELISA Colorimetric TMB	Not Assigned
Reagent (HRP Substrate, Item H)	
ELISA Stop Solution (Item I)	7664-93-9
ELISA 1X Assay/Sample Diluent Buffer C (Item L)	Not Assigned
ELISA 5X Assay/Sample Diluent Buffer B (Item E1)	Not Assigned

SECTION 16. OTHER INFORMATION

Kit Components:

ELISA 5X Assay/Sample Diluent Buffer B (Item E1)	Sigma	RABELADB
ELISA 1X Assay/Sample Diluent Buffer C (Item L)	Sigma	RABELADC
20X Wash Buffer (Item B)	Sigma	RABWASH4
Porcine TNF- $\hat{I}\pm$ Antibody-coated ELISA Plate (Item A)	Sigma	RAB0478A
Lyophilized Porcine TNF- $\hat{I}\pm$ Protein Standard	Sigma	RAB0478C

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(Item C)		
Biotinylated Porcine TNF- Î± Detection Antibody	Sigma	RAB0478D
(Item F)		
HRP-Streptavidin (Item G)	Sigma	RABHRP5
ELISA Stop Solution	Sigma	RABSTOP3
(Item I)		
ELISA Colorimetric TMB Reagent (HRP Substrate, Item H)	Sigma	RABTMB3

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonised System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); LSPN - List of Hazardous Notified Substances (Chile); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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US / EN

Kit Components:

ELISA 5X Assay/Sample Diluent Buffer B (Item E1)					
Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Sigma - RABELADB					No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

ELISA 1X Assay/Sample Diluent Buffer C (Item L)					
Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Sigma - RABELADC					No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

20X Wash Buffer (Item B)					
Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Sigma - RABWASH4					No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

Porcine TNF-α Antibody-coated ELISA Plate (Item A)					
Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Sigma - RAB0478A					Not a hazardous substance or mixture.

Lyophilized Porcine TNF-α Protein Standard (Item C)					
Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Sigma - RAB0478C					No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

Biotinylated Porcine TNF-α Detection Antibody (Item F)					
Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Sigma - RAB0478D					Not a hazardous substance or mixture.

HRP-Streptavidin (Item G)					
Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Sigma - RABHRP5		Danger	May cause allergy or asthma symptoms or breathing difficulties if inhaled.	Avoid breathing mist or vapours. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Dispose of contents/ container to an approved waste disposal plant. In case of inadequate ventilation wear respiratory protection. If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.	

ELISA Stop Solution (Item I)					
Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Sigma -					No hazard pictogram, no

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RABSTOP3					signal word, no hazard statement(s), no precautionary statement(s) required.
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ELISA Colorimetric TMB Reagent (HRP Substrate, Item H)

Product identifier	Pictogram	Signal word	Hazard statements	Precautionary statements	Supplemental information
Sigma - RABTMB3		Warning	Suspected of causing cancer.	Obtain special instructions before use. IF exposed or concerned: Get medical advice/ attention. Store locked up. Dispose of contents/ container to an approved waste disposal plant. Do not handle until all safety precautions have been read and understood. Wear protective gloves/ protective clothing/ eye protection/ face protection.	