

Material Safety Data Sheet (MSDS)

ARG81143 Human beta-Amyloid (1 - 42) ELISA Kit

Version: 2016/08/25

1. Product and Company Identification

Product Catalog No: ARG81143

Product Name: Human beta-Amyloid (1 - 42) ELISA Kit

Supplier: Arigo Biolaboratories Corp.

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2. Composition / Information on Ingredients

Component number	Component name	Volume	Safety Information
ARG81143-001	Antibody-coated microplate	8 X 12 strips	No hazards
ARG81143-002	Standard	2 vial (0.5 ml)	No hazards
ARG81143-003	HRP-conjugated antibody concentrate (30X)	0.4 ml	No hazards
ARG81143-004	1X conjugated antibody dilution buffer	12 ml	No hazards
ARG81143-005	1X Assay Buffer	30 ml	No hazards
ARG81143-006	40X Wash buffer	50 ml	No hazards
ARG81143-007	TMB substrate	15 ml	See below
ARG81143-008	STOP solution	12 ml	1N (4.9%) Sulphuric Acid

3. Hazards Identification

Tetramethylbenzidine: (CAS-No.: 54827-17-7; EC-No.: 259-364-6)

Emergency Overview

OSHA Hazards: Target organ effect, Highly toxic by ingestion, Highly toxic by skin absorption

Target Organs: Heart, Central nervous system, Brain

GHS Classification: Acute toxicity, Oral (Category 2)

Acute toxicity, Dermal (Category 1)

Acute aquatic toxicity (Category 1)

Chronic aquatic toxicity (Category 1)

Pictogram:



Signal word: Danger

$1N H_2SO_4$; (CAS-No. : 7664-93-9; EC-No. : 231-639-5)

Classification of the substance or mixture

These assays contain no substances which are classified as dangerous according to European Union legislation.

Pictogram:

Labelling (REGULATION (EC) No 1272/2008)

Not dangerous substances according to GHS.

Labelling (67/548/EEC or 1999/45/EC)

The product does not need to be labelled in accordance with EC directives or respective national laws.

Other hazards

None known.

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.

Potential acute / delayed health effects:

Eye contact: Causes serious eye irritation / causes burns

Skin contact: Causes skin irritation / causes burns

Inhalation: Harmful if inhaled. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Ingestion: Harmful if swallowed. Irritating to mouth, throat and stomach. / Causes burns

Notes to physician: Consult a physician. Show this safety data sheet to the doctor in attendance

5. Fire-Fighting Measures

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

Hazards from the substance or mixture: In case of fire, toxic and corrosive gases may be formed.

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.

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 inhalation of vapour or mist. Use normal measures for preventive fire protection.

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

Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. Exposure Controls / Personal Protection

Control parameters: Contains no substances with occupational exposure limit values

Appropriate engineering controls: Use with adequate ventilation including local extraction. Ensure that eyewash stations and safety showers are close to the workstation location.

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.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

	Standard; Controls	HRP conjugated antibody	TMB Solution	Stop Solution
Appearance				
The physical state	Lyophilized	Liquid		
Colour	diverse (has no influence to the properties of the mixture)			
Odour	odourless			
Odour threshold	no data available			
pH	7.4 + - 0.2	7.2 + - 0.2	3.5 - 3.9	< 1.0
Melting point/freezing point	no data available			
Initial boiling point and boiling range	no data available			
Flash point	no data available			
Evaporation rate	no data available			
Flammability (solid, gas)	no data available			
Upper/lower flammability or explosive limits	no data available			
Vapour pressure	no data available			
Vapour density	no data available			

Relative density	no data available
Solubility(ies)	no data available
Partition coefficient: n-octanol/water	no data available
Auto-ignition temperature	no data available
Decomposition temperature	no data available
Viscosity	no data available
Explosive properties	no data available
Oxidising properties	no data available

10. Stability and Reactivity

	TMB substrate	Stop solution (Sulfuric acid)
Chemical Stability:	Stable under recommended storage conditions	
Conditions to avoid:	Exposure to moisture, light	Incompatible materials, ignition sources, metals, excess heat, combustible materials, organic materials, reducing agents, exposure to moist air or water, oxidizers, amines, bases.
Materials to Avoid:	Metals, strong acids, strong oxidizing agents	Vigorous reactions with water; alkaline solutions; metals, metal powder; carbides; chlorates; fulminates ; nitrates; picrates; strong oxidizing, reducing, or combustible organic materials. Hazardous gases are evolved on contact with chemicals such as cyanides, sulfides, and carbides.
Hazardous decomposition products:	Carbon oxides, nitrogen oxides	Releases sulfur dioxide at extremely high temperatures.

The reagents in the kit are stable under the storage conditions described in the instructions for use. Hazardous decomposition will not occur.

11. Toxicological Information

Tetramethylbenzidine:

Acute toxicity: Not available

Skin corrosion/irritation: Not available

Serious eye damage/eye irritation: Not available

Respiratory or skin sensitization: Not available

Germ cell mutagenicity:

Genotoxicity in vitro – mouse – lymphocyte: mutation in mammalian somatic cells

Genotoxicity in vivo – mouse – intraperitoneal: micronucleus test

Carcinogenicity:

ARC: 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: Not available

Teratogenicity: Not available

Specific target organ toxicity – single exposure (GHS): Not available

Specific target organ toxicity – repeated exposure (GHS): Not available

Potential Health Effects

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

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

Eyes: Causes 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.

Additional information: RTECS: DV2300000

Sulphuric Acid :

Acute toxicity

Primary irritant effect:

Skin Causes severe irritation and burns on prolonged contact.

Eyes Caused severe burns. Risk of serious damage to eye.

Inhalation Inhalation of mist or vapor will cause irritation of the upper respiratory tract, high concentrations may cause damage to mucous membranes and lungs.

Ingestion May cause burns to mucous membranes, throat and stomach. May cause severe internal injury.

Additional toxicological information:

Acute oral toxicity (LD50): 2140 mg/kg (rat)

Acute toxicity of the vapor (LD50): 320 mg/m³ /2hours (mouse)

510 mg/m³ /2hours (rat)

(TCL0): 3 mg/m³ /24w (human)

12. Ecological Information

Tetramethylbenzidine:

Ecotoxicity: Not available

Bioaccumulative potential: Not available

Mobility in soil: Not available

PBT and vPvB assessment: Not available

Other adverse effects: Not available

Sulphuric Acid

General notes: Harmful effect due to pH shift. Implement necessary measures at the spill and disposal.

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: Large spills must be dealt with separately by qualified disposal personnel. Avoid dispersal of spilt material to soil, waterways, drains and sewers.

14. Transport Information

Land transport ADR/RID (cross-border)

Remarks: No dangerous good in sense of this transport regulation.

Inland shipping ADN:

Remarks: No dangerous good in sense of this transport regulation.

Maritime transport IMDG:

Marine pollutant: No

Remarks: No dangerous good in sense of this transport regulation.

Air transport ICAO-TI and IATA-DGR:

Remarks: No dangerous good in sense of this transport regulation.

Transport/Additional information:

Not dangerous according to the above specifications.

This product is part of a kit. Information in this section refers to the kit as a whole.

15. Regulatory Information

	CAS No.	R-Phrases	S-Phrases	EC-Number
Sulfuric acid	7664-93-9	36/38	26	231-639-5
Tetramethylbenzidine	54827-17-7	36/37/38		259-364-6

Risk phrase index

R36/37/38 Irritating to eyes, respiratory system and skin.

R36/38 Irritating to eyes and skin.

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

16. Other Information

Only trained personal should handle this product. All actions should be done in accordance with legal regulations and common practised hygiene measures in the labs. Read the instruction for use (IFU) carefully.

Safety Phrases: In case of contact with eyes, rinse immediately with plenty of water and see 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.

Data compared to the previous version altered.