

## Material Safety Data Sheet (MSDS)

ARG80905 Human BD-1 / beta Defensin-1 ELISA kit

Version: 2016/10/24

### 1. Product and Company Identification

**Product Catalog No:** ARG80905

**Product Name:** Human BD-1 / beta Defensin-1 ELISA kit

**Supplier:** Arigo Biolaboratories Corp.

No.22, Ln. 227, Gongyuan Rd., Hsinchu City 300 Taiwan

Tel: +886-3-5621738

Fax: +886-3-5613008

### 2. Composition / Information on Ingredients

Component number	Component name	Volume	Safety Information
ARG80905-001	Antibody-coated microplate	1 strip plate : (8*12 strips)	No hazards
ARG80905-002	Standard (Lyophilized)	Batch dependent (ng/vial)	No hazards
ARG80905-003	Standard diluent buffer	20 ml	Contains Proclin 300
ARG80905-004	Antibody conjugate concentrate	1 vial	Contains Proclin 300
ARG80905-005	Antibody diluent buffer	16 ml	Contains Proclin 300
ARG80905-006	HRP-Streptavidin concentrate	1 vial	Contains Proclin 300
ARG80905-007	HRP-Streptavidin diluent buffer	16 ml	Contains Proclin 300
ARG80905-008	20X Wash buffer	50 ml	Contains Proclin 300
ARG80905-009	TMB substrate	12ml	See below
ARG80905-010	Stop Solution	12ml	Contains 0.1N hydrochloric acid
ARG80905-011	Plate Sealers	6 strips	No hazards

### 3. Hazards Identification

**0.1N Hydrochloric acid:** (CAS-No.: 7647-01-0; EC-No.: 231-595-7)

**Skin Irrit:** H315

**Eye Irrit. 2A:** H319

**Pictogram:**



**Signal Word:** WARNING

**Hazard statements:** H315 - Causes skin irritation

H319 - Causes serious eye irritation

**Precautionary statements:** Wash hands thoroughly after handling. Wear protective gloves, clothing and eye and face protection.

---

**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

**Proclin 300:** (CAS-No.: 5965-84-9; EC-No. 613-167-00-5)

**Emergency Overview**

Skin Sens. 1; H317 – May cause an allergic skin reaction

**Pictogram:**



**Signal Word:** WARNING

**Precautionary statements: P261:** Avoid breathing mist.

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

**P280:** Wear protective gloves.

**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

---

## 4. First Aid Measures

**General info:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

**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:**

Fire hazard: Not flammable

Explosion hazard: Not applicable

**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

	Hydrochloric acid	Tetramethylbenzidine	Proclin 300
Appearance	Colorless Liquid	Solid	Colorless Liquid
pH	~1	Not available	Not available
Water Solubility	Completely soluble	Insoluble	Completely soluble
Boiling Point (°C)	Not available	168-169°C (334-336°F)	-40°C
Melting Point (°C)	Not available	168-171°C (334-340°F)	189°C
Flash Point (°C)	Not available	Not available	118°C (Closed cup)
Ignition Temp. (°C)	Not available	Not available	Not available
Density	Not available	Not available	1.03 g/cm <sup>3</sup>

## 10. Stability and Reactivity

	Hydrochloric acid	Tetramethylbenzidine	Proclin 300
Chemical Stability:	Stable under recommended storage conditions		
Conditions to avoid:	Direct sunlight. Extremely high or low temperatures.	Exposure to moisture, light	Not available
Materials to Avoid:	Metals. Strong bases. Cyanides.	Metals, strong acids, strong oxidizing agents	Strong oxidizing agents, reducing agents, Amines, Mercaptans
Hazardous decomposition products:	Other decomposition products - no data available.	Carbon oxides, nitrogen oxides	Carbon oxides, nitrogen oxides(NO <sub>x</sub> ), Sulphur oxides, Hydrogen chloride gas

## 11. Toxicological Information

### 0.1N Hydrochloric acid:

**Acute toxicity:** Not classified

**Skin corrosion/irritation:** Causes skin irritation.

**Serious eye damage/irritation:** Can cause severe burns

**Respiratory or skin sensitization:** Not available

**Germ cell mutagenicity:** Not classified Based on available data, the classification criteria are not met.

**Carcinogenicity:** IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Hydrochloric acid)

**Reproductive toxicity:** Not available

**Specific target organ toxicity (STOT) -single exposure:** Not available

**Specific target organ toxicity (STOT) -repeated exposure:** Not available

**Aspiration hazard:** Not classified Based on available data, the classification criteria are not met

**Information on likely routes of exposure:** Routes of entry anticipated; oral, dermal, inhalation.

**Symptoms related to the physical, chemical and toxicological characteristics:**

---

**Inhalation:** Possible inflammation of the respiratory tract.

**Ingestion:** May be harmful if swallowed. Causes burns.

**Skin contact:** Causes skin irritation.

**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: Not available.

**Effects of chronic exposure:** Affection/discoloration of the teeth.

**Numerical measures of toxicity:** Not available

**Other Information:** NA

**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

---

**Proclin 300:**

**Acute toxicity:** Not available

**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:** Not available

**Carcinogenicity:** Not available

**Reproductive toxicity:** Not available

**Specific target organ toxicity (STOT) -single exposure:** Not available

**Specific target organ toxicity (STOT) -repeated exposure:** Not 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.

**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

**0.1N Hydrochloric acid:**

**Ecotoxicity:** This product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

**Biodegradability:** Not available.

**Bioaccumulative potential:** Not available.

**Mobility in soil:** Not available.

**Other adverse effects:** Not available.

**Tetramethylbenzidine:**

**Ecotoxicity:** Not available

**Bioaccumulative potential:** Not available

**Mobility in soil:** Not available

**PBT and vPvB assessment:** Not available

**Other adverse effects:** Not available

---

**Proclin 300:**

**Ecotoxicity:** Not available

**Biodegradability:** Not available.

**Bioaccumulative potential:** Not available.

**Mobility in soil:** Not 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:** 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

---

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

No data available.

---

### 16. Other Information

---

**Risk Phrases:** Irritating to eyes and skin.

**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.**

---