

SAFETY DATA SHEET

SDS DATE: December 03, 2020



SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: SARS-CoV-2 RBD ELISA Kit
PRODUCT CODES: Cat# E4877-100
RESTRICTIONS ON USE: For laboratory research purposes. Not for drug or household use.
MANUFACTURER: BioVision, Inc.
ADDRESS: 155 S. Milpitas Blvd. Milpitas, CA 95035
EMERGENCY PHONE: 858-373-8066
OTHER CALLS: 408-493-1800
FAX PHONE: 408-493-1801

SECTION 2: HAZARDS IDENTIFICATION

Component	Description	Volume	Safety Information
Microtiter ELISA plate	--	8 x 12 Strips	No hazards
SARS-CoV-2 RBD Standard (1600 pg)	Solid	1 bottle	No hazards
Standard/Sample Dilution Buffer	Liquid (Contains Proclin 300)	25 ml	See Below
RBD Biotin Conjugated Antibody	Liquid (Contains Proclin 300)	120 µl	See Below
Reagent Dilution Buffer	Liquid (Contains Proclin 300)	25 ml	See Below
HRP-Streptavidin Conjugate (SABC)	Liquid (Contains Proclin 300)	120 µl	See Below
TMB Substrate Solution	Liquid	12 ml	No hazards
Stop Solution	Liquid (Contains Hydrochloric acid)	6 ml	See Below
Wash Buffer (20X)	Liquid	25 ml	No hazards
Plate Sealers	--	4	No hazards

Proclin 300:

Emergency Overview

GHS Classification: Acute toxicity, Oral (Category 4), H302
Acute toxicity, Inhalation (Category 4), H332
Skin corrosion (Category 1B), H314
Serious eye damage (Category 1), H318
Skin sensitization (Category 1), H317
Short-term (acute) aquatic hazard (Category 2), H401
Long-term (chronic) aquatic hazard (Category 2), H411

GHS Label elements, including precautionary statements



Pictogram:

Signal word:

Hazard statement(s):

Danger

Hazard statement(s)

H302 + H332 Harmful if swallowed or if inhaled.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects

Precautionary statement(s):

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothing must not be allowed out of the workplace.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

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P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing.
Rinse skin with water or shower.
P304 + P340 + P310 IF INHALED:
Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.
P391 Collect spillage.
P405 Store locked up.
P501 Dispose of contents/ container to an approved waste disposal plant.

HMIS Classification

Health hazard: 3
Chronic health hazard: *
Flammability: 1
Physical hazards: 0

NFPA Rating

Health hazard: 3
Fire: 1
Reactivity hazard: 0

Potential Health Effects

Inhalation: May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

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

Eyes: Causes eye burns.

Ingestion: May be harmful if swallowed.

Aggravated medical condition: May provoke asthmatic response in persons with asthma who are sensitive to airway irritants.

Hydrochloric acid (HCl):

Emergency Overview

GHS Classification:

Corrosive to metals (Category 1), H290
Skin corrosion (Category 1A), H314
Eye irritation (Category 2A), H319
Short-term (acute) aquatic hazard (Category 3), H402

GHS Label elements, including precautionary statements

Pictogram:



Signal word:

Danger

Hazard statement(s):

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H402 Harmful to aquatic life.

Precautionary statement(s):

P234 Keep only in original container.
P260 Do not breathe dust or mist.
P264 Wash skin thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.
P390 Absorb spillage to prevent material damage.
P405 Store locked up.
P406 Store in corrosive resistant container with a resistant inner liner.
P501 Dispose of contents/ container to an approved waste disposal plant.

HMIS Classification

Health hazard: 2
Chronic Health Hazard: *
Flammability: 1
Physical hazards: 0

NFPA Rating

Health hazard: 1
Fire: 1
Reactivity Hazard: 0

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Potential Health Effects

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

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

Eyes: May cause eye irritation.

Ingestion: May be harmful if swallowed.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Number	EC-No.	Molecular Weight	Chemical Formula	Concentration
Proclin 300	96118-96-6	--	--	--	<0.05%
Hydrochloric acid	7647-01-0	231-595-7	36.46	HCl	<20%

SECTION 4: FIRST AID MEASURES

Proclin 300:

Description of first-aid measures

General advice: Consult a physician. Show this material safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed: The most important known symptoms and effects are described in the labelling (see section 2 and/or in section 11)

Indication of any immediate medical attention and special treatment needed: No data available

HCl:

General advice Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If swallowed Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

SECTION 5: FIRE-FIGHTING MEASURES

Proclin 300:

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

Special hazards arising from the substance or mixture: Carbon oxides, Nitrogen oxides (NOx), Sulfur oxides, Hydrogen chloride gas

Advice for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

HCl:

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

Special hazards arising from the substance or mixture Carbon oxides

Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

Further information No data available

SECTION 6: ACCIDENTAL RELEASE MEASURES

Proclin 300:

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up: Soak up with inert absorbent material and dispose of as hazardous waste. Keep insuitable, closed containers for disposal.

Reference to other sections: For disposal see section 13.

HCl:

Personal precautions, protective equipment and emergency procedures Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 7: HANDLING AND STORAGE

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Proclin 300:

Handling: Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. For precautions see section 2.

Storage: 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. Storage class (TRGS 510): 8A: Combustible, corrosive hazardous materials.

HCl:

Handling: Avoid inhalation of vapour or mist.

Storage: 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.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Proclin 300:

Control parameters:

Ingredients with workplace control parameters: Contains no substances with occupational exposure limit values.

Exposure controls:

Appropriate engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. 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 such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. 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.

Eye/face protection

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

HCl:

Components	CAS-No.	Value	Control parameters	Basis
HCl	1310-73-2	CEIL	2 mg/m ³	USA. ACGIH Threshold Values (TLV)
		C	2 mg/m ³	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	2 mg/m ³	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		C	2 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
	Eye, skin, & Upper Respiratory Tract irritation			
		C	1 ppm 1.4 mg/m ³	USA. NIOSH Recommended Exposure Limits

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	Proclin 300	HCl
Appearance	Liquid	Light yellow liquid
pH:	4.1 at 100 g/l	< 1 at 20 °C
Water Solubility:	No data available	soluble
Other Solubility:	No data available	No data available
Boiling Point (°C):	189 °C 372 °F	> 100 °C - lit.
Melting Point (°C):	-40 °C (-40 °F)	-30 °C
Flash Point (°C):	118 °C (244 °F)-closed cap	Not applicable
Ignition Temperature (°C):	No data available	No data available
Density:	1.03 g/cm ³	1,2 g/cm ³ at 25 °C

SECTION 10: STABILITY AND REACTIVITY

Property	Proclin 300	HCl
Reactivity		No data available
Chemical stability:	Stable under recommended storage conditions.	
Conditions to avoid:	No data available	
Materials to avoid:	No data available	Bases, Amines, Alkali metals, Metals, permanganates, for example potassium permanganate, Fluorine, metal acetylides, hexalithium

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		disilicide
Hazardous decomposition products:	Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx), Sulfur oxides, Hydrogen chloride gas	Hydrogen chloride gas (fire condition)

SECTION 11: TOXICOLOGICAL INFORMATION

Proclin 300:

Acute toxicity: LD50 Oral - Rat - 862 mg/kg
LD50 Dermal - Rabbit - 2,800 mg/kg
No data available

Skin corrosion/irritation: Skin - Rabbit
Result: Corrosive

Serious eye damage/eye irritation: Eyes - rabbit
Result: Corrosive to eyes

Respiratory or skin sensitization: - Guinea pig
Result: May cause sensitization by skin contact.

Germ cell mutagenicity: no data available

Carcinogenicity:

- IARC: 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: no data available

Specific target organ toxicity – single exposure (GHS): no data available

Specific target organ toxicity – repeated exposure (GHS): no data available

Aspiration hazard: no data available

Synergistic effects: no data available

Additional information: RTECS: Not available

HCl:

Acute toxicity: Inhalation: Cough Difficulty in breathing (Hydrochloric Acid)

LCLo Inhalation - Human - 30 min - 1.970 mg/m³ (Hydrochloric Acid)

Remarks: (RTECS) Inhalation: absorption (Hydrochloric Acid)

Skin corrosion/irritation: Skin - reconstructed human epidermis (RhE) (Hydrochloric Acid)

Result: Corrosive (OECD Test Guideline 431)

Serious eye damage/eye irritation: Eyes - Bovine cornea (Hydrochloric Acid)

Result: Corrosive (OECD Test Guideline 437)

Respiratory or skin sensitization: Maximisation Test - Guinea pig (Hydrochloric Acid)

Result: negative (OECD Test Guideline 406)

Germ cell mutagenicity: Chromosome aberration test in vitro (Hydrochloric Acid) Chinese hamster ovary cells

Result: Conflicting results have been seen in different studies.

Carcinogenicity:

- IARC: 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: no data available

Teratogenicity: no data available

Specific target organ toxicity – single exposure (GHS): May cause respiratory irritation. (Hydrochloric Acid) The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation. (Hydrochloric Acid) Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath, Inhalation may lead to the formation of oedemas in the respiratory tract., Possible damages: damage of respiratory tract, tissue damage (Hydrochloric Acid)

Specific target organ toxicity – repeated exposure (GHS): The substance or mixture is not classified as specific target organ toxicant, repeated exposure

Aspiration hazard: No aspiration toxicity classification (Hydrochloric Acid)

Synergistic effects: No data available

Additional information: RTECS: MW4025000

Inhalation of vapors may cause: burning sensation, Cough, wheezing, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema (Hydrochloric Acid)

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. (Hydrochloric Acid)

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After uptake of large quantities: (Hydrochloric Acid) Cyanosis, Circulatory collapse, respiratory arrest (Hydrochloric Acid) Systemic effects: (Hydrochloric Acid) rise in blood pressure, bradycardia (Hydrochloric Acid) This substance should be handled with particular care. (Hydrochloric Acid)

SECTION 12: ECOLOGICAL INFORMATION

Proclin 300:

Ecotoxicity: No data available

Persistence and degradability: no data available

Toxicity: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Toxic to aquatic life with long lasting effects.

HCl:

Toxicity: Toxicity to fish LC50 - Gambusia affinis (Mosquito fish) - 282 mg/l - 96 h (Hydrochloric Acid) Remarks: (IUCLID)

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 13: DISPOSAL CONSIDERATIONS

Proclin 300:

Waste treatment methods

Product: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an after burner and scrubber.

Contaminated packaging: Dispose of as unused product.

HCl:

Product: Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Contaminated packaging: Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

Proclin 300:

DOT (US)

UN number: 3265 Class: 8 Packing group: II

Proper shipping name: Corrosive liquid, acidic, organic, n.o.s. (Mixture of 5-Chloro-2- methyl-4-isothiazolin-3-one and 2-Methyl-2H -isothiazol-3-one (3:1))

Reportable Quantity (RQ):

Poison Inhalation Hazard: No

IMDG

UN number: 3265 Class: 8 Packing group: II EMS-No: F-A, S-B

Proper shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Mixture of 5- Chloro-2-methyl-4-isothiazolin-3-one and 2-Methyl-2H -isothiazol-3-one (3:1))

Marine pollutant : yes

IATA

UN number: 3265 Class: 8 Packing group: II

Proper shipping name: Corrosive liquid, acidic, organic, n.o.s. (Mixture of 5-Chloro-2- methyl-4-isothiazolin-3-one and 2-Methyl-2H -isothiazol-3-one (3:1))

HCl

DOT (US)

UN number: 1823 Class: 8 Packing group: II

Proper shipping name: HCl, solid

Reportable Quantity (RQ): 1000 lbs

Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

UN number: 1823 Class: 8 Packing group: II EMS-No: F-A, S-B

Proper shipping name: HCL, SOLID

Marine pollutant: No

IATA

UN number: 1823 Class: 8 Packing group: II

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Proper shipping name: HCl, solid



SECTION 15: REGULATORY INFORMATION

SARA 302 Components: No components are subject to reporting levels established by SARA Title III, Section 302


SARA 313 Components: No components are subject to reporting levels established by SARA Title III, Section 313

SARA 311/312 Hazards: HCl Acute Health Hazard

Massachusetts Right To Know Components: HCl, CAS-No. 1310-73-2; Revision Date: 2007-03-01

Pennsylvania Right To Know Components: HCl, CAS-No. 1310-73-2; Revision Date: 2007-03-01

New Jersey Right To Know Components: HCl, CAS-No. 1310-73-2; Revision Date: 2007-03-01

California Prop. 65 Components:  WARNING: This product can expose you to chemicals including TMB, which is known to the State of California to cause cancer. For more information go to www.p65warnings.ca.gov/

EU regulations

Component	Risk Phrases	Safety Phrases
Proclin 300	--	--
HCl	--	--

SECTION 16: OTHER INFORMATION:

DISCLAIMER:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. BioVision, Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.