

Safety Data Sheet

Pertussis Toxin from *Bordetella pertussis*

Product #180

Pertussis Toxin from *Bordetella pertussis* (Salt Free)

Product #181

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product name : Pertussis Toxin from *Bordetella pertussis*
 Product number : 180

Product name : Pertussis Toxin from *Bordetella pertussis* (Salt Free)
 Product number : 181

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

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company : List Biological Laboratories, Inc.
 540 Division Street
 Campbell, CA 95008-6906, USA

Telephone : (408) 866-6363
 (800) 726-3213

Fax : (408) 866-6364

1.4 Emergency telephone number

24 Hour Emergency : 1 (800) 255-3924 ChemTel Domestic
 Phone # : +1 (813) 248-0585 ChemTel International
 ChemTel Customer # : MIS2844833

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral (Category 2), H300
 Acute toxicity, Inhalation (Category 2), H330
 Acute toxicity, Dermal (Category 2), H310
 Eye irritation (Category 2A), H319

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word : Danger
 Hazard statement(s)
 H300 + H310+ H330 : Fatal if swallowed, if in contact with skin or if inhaled
 H319 : Causes serious eye irritation.

Precautionary statement(s)
 P260 : Do not breathe dust/fume/gas/vapors/spray.
 P264 : Wash skin thoroughly after handling.
 P270 : Do not eat, drink or smoke when using this product.

P271	Use in a well-ventilated area.
P280	Wear protective gloves/ protective clothing/ eye protection.
P301 + P330 + P316	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water
P304 + P340 + P316	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable to breathing. Get medical advice/attention.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
P337 + P317	If eye irritation occurs: Get medical help.
P361 + P364	Take off immediately all contaminated clothing and wash before reuse
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Biohazard. Handle as if capable of transmitting infectious agents.

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Mixtures

Synonyms : PT, PTx, Islet Activating Protein, Pertussigen

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Component	CAS No.	Percent (%)
Pertussis Toxin	70323-44-3	~3
Sodium Chloride (NaCl)	7647-14-5	~41
Sodium Phosphate, monobasic, monohydrate	10049-21-5	~19
Sodium Phosphate, dibasic, heptahydrate	7782-85-6	~37

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Component	CAS No.	Percent (%)
Pertussis Toxin	70323-44-3	~100

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

Move affected person out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

Remove victim to fresh air and keep at rest in a position comfortable to breathing. Get medical advice/attention.

In case of skin contact

Wash with plenty of soap and water. Consult a physician.

In case of eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Consult a physician.

If swallowed

Immediately call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth with water. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11.

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use extinguishing media appropriate to surrounding fire conditions.

5.2 Special hazards arising from the substance or mixture

Not flammable or combustible.

5.3 Protective equipment and precautions for fire-fighters

Use an approved/certified respirator.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Wear appropriate laboratory attire including lab coat, gloves and safety glasses. Nitrile gloves are recommended when handling lyophilized material. Avoid formation of dust and aerosols. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust, vapors, mist or gas.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

In case of a spill or a release, take precautions to minimize worker exposure. For spills onto surface areas, the contaminated surface should be thoroughly sprayed or rinsed for at least five minutes with at least a 0.5% sodium hypochlorite solution, then wiped dry. Autoclaving may be applied to contaminated material which is in solution or to which the autoclave steam has access. Autoclaving at $\geq 121^{\circ}\text{C}$, ≥ 15 psi in a validated cycle will render the product safe.

Hold all material for appropriate disposal as described in Section 13 DISPOSAL CONSIDERATIONS.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Wear appropriate laboratory attire including lab coat, gloves and safety glasses. Nitrile gloves are recommended when handling lyophilized material. Avoid formation of dust and aerosols. Ensure adequate ventilation.

7.2 Conditions for safe storage, including any incompatibilities

Store at $2 - 8^{\circ}\text{C}$ prior to and following reconstitution. DO NOT FREEZE. Keep container tightly closed in a dry and well-ventilated area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eyes

Wear safety goggles or glasses.

Skin

Handle with appropriate gloves. Wear nitrile gloves when handling the product in the lyophilized form. Wear appropriate laboratory clothing / lab coat.

Respiratory protection

Use respirators and components tested and approved under appropriate government standards; or, ensure adequate ventilation using engineering controls, such as a biological safety cabinet.

9. PHYSICAL AND CHEMICAL PROPERTIES

a) Appearance	Form: solid; Color: white
b) Odor	Data not available
c) Odor threshold	Data not available
d) pH	Data not available
e) Melting point / freezing point	Data not available
f) Initial boiling point and boiling range	Data not available
g) Flash point	Data not available
h) Evaporation rate	Data not available
i) Flammability (solid, gas)	Data not available
j) Upper/Lower flammability or explosive limits	Data not available
k) Vapor pressure	Data not available
l) Vapor density	Data not available
m) Relative density	Data not available
n) Solubility(ies)	Suspension
o) Partition coefficient: n-octanol/water	Data not available
p) Auto-ignition temperature	Data not available
q) Decomposition temperature	Data not available
r) Viscosity	Data not available

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

No data available

11. TOXICOLOGY INFORMATION

11.1 Information on toxicological effects

To the best of our knowledge, the chemical, physical and toxicological properties have not been fully investigated.

Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

Oral: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

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.

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

No data available

Specific target organ toxicity – repeated exposure

No data available

Additional Information

Signs and Symptoms of Exposure

No data available

RTECS: XW5883750

LD₅₀ rat, 114 µg/kg iv; LD₅₀ mice, 127 µg/kg iv

Toxicity Data Reference:

Toyota, T, et al., Tohoku J. Exp. Med. **130**:105-116, 1980.

Reported changes in insulin secretory response due to intravenous injection of 1 µg /kg in 5 volunteers.

Gill, DM, Microbiol. Rev. **46**:86-94, 1982.

Estimated lethal amount for a 100 lb (45.5 kg) human – without treatment or vaccinations – extrapolated from animal studies: 683 µg ip

12. ECOLOGICAL INFORMATION**12.1 Toxicity**

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS

Dispose of waste in accordance with appropriate federal, state and local regulations or applicable governmental requirements.

14. TRANSPORT INFORMATION**IATA**

UN number: UN3462 Class: 6.1 Packing group: II

Proper shipping name: Toxins, extracted from living sources, solid, n.o.s. (Pertussis from Bordetella Pertussis)

DOT (US)

UN number: UN3462 Class: 6.1 Packing group: II

Proper shipping name: Toxins, extracted from living sources, solid, n.o.s. (Pertussis from Bordetella Pertussis)

15. REGULATORY INFORMATION**OSHA Hazards**

Danger

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

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.

SARA 311/312 Hazards

Acute Health Hazard

California Prop. 65 Components

This product does not contain any chemicals known to the State of California to cause cancer, birth defects or any other reproductive harm.

16. OTHER INFORMATION

Version: 4.0 / Issued Date: 12/2019

CAUTION – Not fully tested. For research use only. Not for human use.

The preceding information is based on available data and is believed to be correct but does not purport to be all inclusive and should be used as a guide in handling this material. Users should make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials, the safety and health of employees and customers, and the protection of the environment. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists. List Biological Laboratories, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.