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# **Material Safety Data Sheet**

**Product Name: Bungarotoxin** 

Catalog No.: AF3173
Batch No.: AF02

CAS Number: 11032-79-4

#### PHYSICAL AND CHEMICAL PROPERTIES

Chemical Name: α-Butx;Alpha-Bgt;Alpha-Butx;A-Bungarotoxin;Alpha-Bungarotoxin;M.W. 7984.14 C338H529N97O105S11;Bungarus multicinctus toxin, Alpha;A-Bungarotoxin from the Venom of the;Alpha-Bungarotoxin, Bungarus multicinctus;H-ile-Val-Cys-His-Thr-Thr-Ala-Thr-Ser-Pro-ile-Ser-Ala-Val-Thr-Cys-Pro-Pro-Gly-Glu-Asn-Leu-Cys-Tyr-Arg-Lys-Met-Trp-Cys-Asp-Ala-Phe-Cys-Ser-Ser-Arg-Gly-Lys-Val-Val-Glu-Leu-Gly-Cys-Ala-Ala-Thr-Cys-Pro-Ser-Lys-Lys-Pro-Tyr-Glu-Glu-Val-Thr-Cys-Ser-Thr-Asp-Lys-Cys-Asn-Pro-His-Pro-Lys-Gln-Arg-Pro-Gly-Oh

Batch Molecular Formula: C<sub>338</sub>H<sub>529</sub>N<sub>97</sub>O<sub>105</sub>S<sub>11</sub>

Batch Molecular Weight: 8,000 Da.

Solubility: Water, saline and buffer (add saline or buffer after complete solubilization in water).

**Biological Description:**  $\alpha$ -Bungarotoxin is an Neurotoxin that blocks neuromuscular transmission via irreversible inhibition of nicotinic ACh receptors (nAChRs). Prevents opening of nicotinic receptor-associated ion channels and is selective for  $\alpha$ 7 receptors over  $\alpha$ 3 $\beta$ 4 receptors (IC50 values are 1.6 nM and > 3  $\mu$ M respectively).

## **Batch Molecular Structure:**

Ile-Val-Cys-His-Thr-Thr-Ala-Thr-Ile-Pro-Ser-Ala-ValThr-Cys-Pro-Pro-Gly-Glu-Asn-Leu-Cys-Tyr-Arg-LysMet-Trp-Cys-Asp-Ala-Phe-Cys-Ser-Ser-Arg-Gly-LysVal-Val-Glu-Leu-Gly-Cys-Ala-Ala-Thr-Cys-Pro-SerLys-Lys-Pro-Tyr-Glu-Glu-Val-Thr-Cys-Cys-Ser-ThrAsp-Lys-Cys-Asn-His-Pro-Pro-Lys-Arg-Gln-Pro-Gly



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CAUTION: For Research Use Only

Not For Human Use or Veterinary Use or Therapeutic Use

Not fully tested

### **HAZARDS IDENTIFICATION**

## **Very Toxic**

Harmful in contact with skin.

Harmful in contact with Eye/face.

Harmful if swallowed.

Very toxic to aquatic organisms.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

#### **FIRST AID MEASURES**

## In all cases of exposure, obtain medical advice immediately.

### In case of skin contact

Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.

### In case of eye contact

Flush with copious amounts of water for at least 15 minutes. Consult a doctor.

#### If swallowed

Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

#### If inhaled

Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.

### Most important symptoms and effects, both acute and delayed

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

### Indication of immediate medical attention and special treatment needed

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

## **FIRE FIGHTING MEASURES**

## **Extinguishing Media:**

Material is non-combustible. Use extinguishing media appropriate to surrounding fire conditions.

## **Special Firefighting Procedures:**

Wear self-contained breathing apparatus and full protective clothing to prevent contact with skin and eyes.

Unusual fire and explosive hazards: May emit toxic gases upon thermal decomposition.



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### **ACCIDENTAL RELEASE MEASURES**

Evacuate area. Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves. Wear disposable overalls and discard them after use. Cover material with dry lime or soda ash. Sweep up and place in an appropriate container. Avoid raising dust. Hold for appropriate disposal. Decontaminate spill site with 10% caustic solution and ventilate area after pick-up is complete.

#### **HANDLING AND STORAGE**

**Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above -20°C (-4°F).

**Handling:** Keep away from heat. Keep away from source of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Avoid contact with skin. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label.

### **EXPOSURE CONTROLS / PERSONAL PROTECTION**

## Appropriate engineering controls

Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place.

Ensure laboratory is equipped with a safety shower and eye wash station.

Personal protective equipment

## Eye/face protection

Use appropriate safety glasses.

### **Skin protection**

Use appropriate chemical resistant gloves.

Gloves should be inspected before use. Wash and dry hands thoroughly after handling.

## **Body protection**

Wear appropriate protective clothing.

**Respiratory protection** If risk assessment indicates necessary, use a suitable respirator.

#### **PHYSICAL AND CHEMICAL PROPERTIES**

Physical state: Solid Density: Not available. Flash point: Not available.

Explosive properties: Not available. Solubility: Easily soluble in water.

### STABILITY AND REACTIVITY

Stability: Stable under normal handling conditions. Conditions to Avoid: Do not shake or vortex.

Hazardous Combustion or Decomposition Products: May emit toxic gases such as carbon dioxide, carbon monoxide and nitrogen oxides upon thermal decomposition.



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### **TOXICOLOGICAL INFORMATION**

Harmful if inhaled, swallowed or absorbed through skin .To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

### **ECOLOGICAL INFORMATION**

Data not yet available.

#### **DISPOSAL CONSIDERATIONS**

Methods of disposal: Waste must be disposed of in accordance with federal, state and local environmental control regulations.

### **REGULATORY INFORMATION**

European information.

## **OTHER INFORMATION**

The above information is believed to be correct, but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow local and national safety legislation. The absence of warning may not, under any circumstances, be taken to mean that no hazard exists.

**LAST UPDATED: February, 2013**