

# PRODUCT INFORMATION



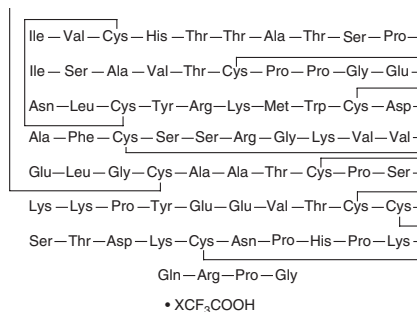
## $\alpha$ -Bungarotoxin (trifluoroacetate salt)

Item No. 16385

**Peptide Sequence:** IVCHTTATSPISAVTCPPGENLCY  
RKMWCDAFCSSRGKVVELGCAA  
TCPSKPYEEVTCSTDKCNPHP  
KQRPG, trifluoroacetate salt  
(Modifications: Disulfide bridge between  
3-23, 16-44, 29-33, 48-59, 60-65)

**MF:** C<sub>338</sub>H<sub>529</sub>N<sub>97</sub>O<sub>105</sub>S<sub>11</sub> • XCF<sub>3</sub>COOH

**FW:** 7,984.2  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

$\alpha$ -Bungarotoxin (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the  $\alpha$ -bungarotoxin (trifluoroacetate salt) in water. The solubility of  $\alpha$ -bungarotoxin (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

$\alpha$ -Bungarotoxin is a snake venom-derived toxin that irreversibly binds nicotinic acetylcholine receptors ( $K_i = \sim 2.5 \mu\text{M}$  in rat) present in skeletal muscle, blocking action of acetylcholine at the postsynaptic membrane and leading to paralysis.<sup>1-3</sup> It has been widely used to characterize activity at the neuromuscular junction, which has numerous applications in neuroscience research.<sup>4,5</sup>

### References

1. Changeux, J.-P., Kasai, M., and Lee, C.-Y. Use of a snake venom toxin to characterize the cholinergic receptor protein. *Proc. Natl. Acad. Sci. USA* **67(3)**, 1241-1247 (1970).
2. Mukhin, A.G., Gündisch, D., Horti, A.G., et al. 5-Iodo-A-85380, an  $\alpha 4\beta 2$  subtype-selective ligand for nicotinic acetylcholine receptors. *Mol. Pharmacol.* **57(3)**, 642-649 (2000).
3. Plomp, J.J. and Molenaar, P.C. Involvement of protein kinases in the upregulation of acetylcholine release at endplates of  $\alpha$ -bungarotoxin-treated rats. *J. Physiol.* **493(Pt 1)**, 175-186 (1996).
4. Grady, S.R., Salminen, O., Laverty, D.C., et al. The subtypes of nicotinic acetylcholine receptors on dopaminergic terminals of mouse striatum. *Biochem. Pharmacol.* **74(8)**, 1235-1246 (2007).
5. Nirthanan, S. and Gwee, M.C.E. Three-finger  $\alpha$ -neurotoxins and the nicotinic acetylcholine receptor, forty years on. *J. Pharmacol. Sci.* **94(1)**, 1-17 (2004).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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