

# PRODUCT INFORMATION

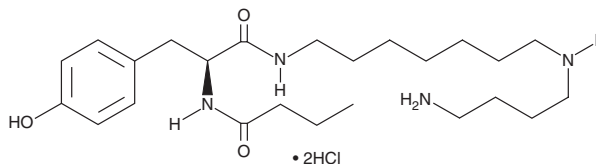


## Philanthotoxin 74 (hydrochloride)

Item No. 14607

**CAS Registry No.:** 1227301-51-0  
**Formal Name:** N-[7-[(4-aminobutyl)amino]heptyl]-4-hydroxy- $\alpha$ S-[(1-oxobutyl)amino]-benzenepropanamide, dihydrochloride

**Synonym:** PhTx-74  
**MF:** C<sub>24</sub>H<sub>42</sub>N<sub>4</sub>O<sub>3</sub> • 2HCl  
**FW:** 507.5  
**Purity:** ≥98%  
**Supplied as:** A solid  
**Storage:** Room temperature  
**Stability:** ≥4 years



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

### Laboratory Procedures

PhTx-74 (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the PhTx-74 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. PhTx-74 (hydrochloride) is soluble in the organic solvent DMSO. It is also soluble in water. The solubility of PhTx-74 (hydrochloride) in DMSO and water is approximately 100 mM. We do not recommend storing the aqueous solution for more than one day.

### Description

PhTx-74 is a synthetic analog of the naturally-occurring wasp venom toxin philanthotoxin-4,3,3. It is a subtype-selective AMPA receptor antagonist that inhibits homomeric GluR1 and GluR3 as well as heteromeric GluR1/2 receptors (80-100% of glutamate-evoked currents inhibited at 100  $\mu$ M). It exhibits minimal to no effect on monomeric GluR2 or heteromeric GluR2/3 receptors at concentrations up to 500  $\mu$ M.<sup>1</sup> PhTx-74 inhibits the GluR5(Q) receptor with a K<sub>i</sub> value of 0.29  $\mu$ M.<sup>2</sup>

### References

1. Nilsen, A. and England, P.M. A subtype-selective, use-dependent inhibitor of native AMPA receptors. *J. Am. Chem. Soc.* **129(16)**, 4902-4903 (2007).
2. Kromann, H., Krikstolaityte, S., Andersen, A.J., *et al.* Solid-phase synthesis of polyamine toxin analogues: Potent and selective antagonists of Ca<sup>2+</sup>-permeable AMPA receptors. *J. Med. Chem.* **45(26)**, 5745-5754 (2002).

#### 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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