Product Data Sheet

Chemical Properties

Product Name: Huwentoxin XVI

Cas No.: 1600543-88-1

M.Wt: 4437.11

Formula: C196H292N50O56S6

Solubility: Soluble to 1 mg/ml in H2O

Storage: Store at -20°C

General tips: For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shopping Condition: Evaluation sample solution: ship with blue ice
All other available size: ship with RT, or blue ice upon request

Biological Activity

Targets: Membrane Transporter/Ion Channel

Pathways: Calcium Channel

Description:

Huwentoxin XVI (HWTX-XVI) is composed of 39 amino acid residues including six cysteines. HWTX-XVI is a novel neurotoxin from the venom of Chinese tarantula O. huwena, and specifically block N-type calcium channels. [1] N-type calcium channels are often highly expressed both in dorsal root ganglia cell bodies and in the synaptic terminals projecting to dorsal horn of the spinal cord N-type calcium channels play...
important roles in the control of neurotransmission release and transmission of pain signals to the central nervous system.[2]

Electrophysiological assay indicated that HWTX-XVI specifically inhibited N-type calcium channels in rat dorsal root ganglion cells. HWTX-XVI specifically inhibits GVIA sensitive, N-type calcium channels in rat DRG cells.[1]

HWTX-XVI could almost completely block the twitch response of rat vas deferens to low-frequency electrical stimulation. HWTX-XVI’s analgesic effects, non-toxic and complete reversibility make it an interesting tool for developing novel drugs for the treatment of N-type calcium channel-related diseases.[1,2]

Reference:

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most ApexBio products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.