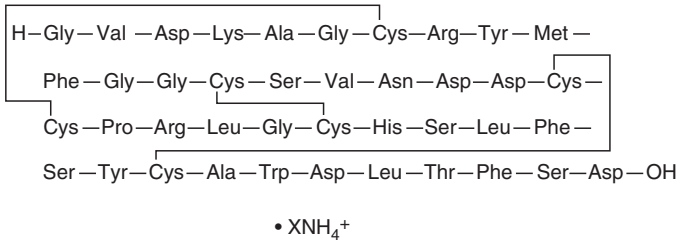
PRODUCT INFORMATION

SNX-482 (ammonium salt)

Item No. 30988

Formal Name: glycyl-L-valyl-L-α-aspartyl-L-lysyl-L-alanylglycyl-L-cysteinyl-L-arginyl-L-tyrosyl-L-methionyl-L-phenylalanylglycylglycyl-L-cysteinyl-L-seryl-L-valyl-L-asparaginyl-L-α-aspartyl-L-α-aspartyl-L-cysteinyl-L-cysteinyl-L-prolyl-L-arginyl-L-leucylglycyl-L-cysteinyl-L-histidyl-L-seryl-L-leucyl-L-phenylalanyl-L-seryl-L-tyrosyl-L-cysteinyl-L-alanyl-L-tryptophyl-L-α-aspartyl-L-leucyl-L-threonyl-L-phenylalanyl-L-seryl-L-aspartic acid, cyclic (7→21),(14→26),(20→33)-tris(disulfide), ammonium salt



MF: $C_{192}H_{274}N_{52}O_{60}S_7 \bullet XNH_4$
FW: 4,495.0
Purity: ≥95%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Synthetic

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

Laboratory Procedures

SNX-482 (ammonium salt) is supplied as a solid. A stock solution may be made by dissolving the SNX-482 (ammonium salt) in water. We do not recommend storing the aqueous solution for more than one day.

Description

SNX-482 is a peptide originally isolated from *H. gigas* venom that acts as a class E/R-type voltage-sensitive calcium channel blocker (IC_{50} = 30 nM in 192C cells expressing human class E channels).[1] It is selective for class E/R-type over class A and class B calcium channels (IC_{50}s = >280 and ~800 nM, respectively), as well as the voltage-gated potassium channels K_v1.1, K_v1.2, and K_v1.4 (IC_{50}s = >140 nM for all). SNX-482 inhibits class E/R-type calcium currents in isolated rat posterior pituitary (IC_{50} = 4 nM), however, it has no effect on class E/R-type calcium currents in isolated rat granule cells, retinal ganglion cells, or hippocampal pyramidal cells at concentrations up to 200 nM. Intrathecal administration of SNX-482 (0.5 µg/animal) inhibits formalin-induced neurokinin-1 (NK_1) receptor internalization and *cfos* expression in the ipsilateral dorsal horn and reduces formalin-induced paw flinching in rats.[2]

References

1. Newcomb, R., Chen, X., Dean, R., *et al.* SNX-482: A novel class E calcium channel antagonist from tarantula venom. *CNS Drug Rev.* **6(2)**, 153-173 (2000).
2. Terashima, T., Xu, Q., Yamaguchi, S., *et al.* Intrathecal P/Q- and R-type calcium channel blockade of spinal substance P release and c-Fos expression. *Neuropharmacology* **75**, 1-8 (2013).

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