Product Datasheet

µ-conotoxin PIIIA

Product name : µ-conotoxin PIIIA	**Synonyms :**
Catalog # : 08CON006	

Product description

µ-Conotoxin PIIIA (mu-conotoxin PIIIA) has been isolated from the venom of the cone Conus purpurascens. **µ-conotoxin PIIIA** demonstrated a higher affinity for the mammalian muscle sodium channel $Na_v1.4$ (IC_{50} ~ 44 nM) than for the CNS $Na_v1.2$ subtype (IC_{50} ~ 640 nm). **µ-Conotoxin PIIIA** blocks more irreversibly amphibian muscle sodium channels than mammalian ones.

Product specifications

AA sequence: pGlu-Arg-Leu-Cys4-Cys5-Gly-Phe-Hyp-Lys-Ser-Cys11-Arg-Ser-Arg-Gln-Cys16-Lys-Hyp-His-Arg-Cys21-Cys22-NH_2
Disulfide bonds: Cys^4-Cys^{16}, Cys^5-Cys^{21} and Cys^{11}-Cys^{22}
Length (aa): 22
Formula: $C_{103}H_{165}N_{40}O_{28}S_6$
Appearance: White lyophilized solid
Molecular Weight: 2604.10 Da
CAS number:
Source: Synthetic
Counterion: TFA salts
Solubility: Water or saline buffer, 5 mg/mL maximum (recommendation)

Formulation

Storage/Stability: Shipped at ambient temperature under lyophilized powder. Store at -20°C (-4°F). Do not freeze-thaw. Aliquot sample if required and store at -80°C (-112°F).
Expiry date: One year
Use restrictions: For laboratory use only. Not for drug, household or other uses. Not for use in diagnostic or therapeutic procedures.

Related products

- ProTx-II - #07PTX002: $Na_v1.7$ selective inhibitor
- Biotinyl-ProTx-II - #12PTB002: $Na_v1.7$ selective inhibitor
- Huwentoxin I - #07HWT001: voltage-gated sodium channel inhibitor
- Huwentoxin IV - #07HWT002: voltage-gated sodium channel inhibitor
- Hainantoxin IV - #12HTX001: selective blocker of TTX-S channels
- Jingzhaotoxin III - #12JZH003: selective blocker of $Na_v1.5$ channel
- GsAF-I - #12GSF001: voltage-gated sodium channel inhibitor
- GsAF-II - #12GSF002: voltage-gated sodium channel inhibitor
- Phrixotoxin-3 - #13PHX003: $Na_v1.2$ selective blocker

References

- Nielsen, K. J., *et al.* (2002) Solution structure of mu-conotoxin PIIIA, a preferential inhibitor of persistent tetrodotoxin-sensitive sodium channels, *J Biol Chem*.
- Safo, P., *et al.* (2000) Distinction among neuronal subtypes of voltage-activated sodium channels by mu-conotoxin PIIIA, *J Neurosci*.
- Shon, K. J., *et al.* (1998) mu-Conotoxin PIIIA, a new peptide for discriminating among tetrodotoxin-sensitive Na channel subtypes, *J Neurosci*

For laboratory research use only

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