Product Datasheet

ω-conotoxin GVIA

Product name : ω-conotoxin GVIA	**Synonyms :** omega CnTx GVIA
Catalog # : 08CON003	

Product description

ω-conotoxin GVIA (omega conotoxin GVIA) has been isolated from the venom of the cone Conus geographus. **ω-conotoxin GVIA** acts at presynaptic membranes. It binds and blocks specifically **voltage-dependent N-type Ca^{2+} channels $Ca_v2.2$ channel** with an ED_{50} of 68pM.

Product specifications

AA sequence: Cys^{1}-Lys-Ser-Hyp-Gly-Ser-Ser-Cys^{8}-Ser-Hyp-Thr-Ser-Tyr-Asn-Cys^{15}-Cys^{16}-Arg-Ser-Cys^{19}-Asn-Hyp-Tyr-Thr-Lys-Arg-Cys^{26}-Tyr-NH_2
Disulfide bonds: Cys^{1}-Cys^{16}, Cys^{8}-Cys^{19} and Cys^{15}-Cys^{26}
Length (aa): 27
Formula: $C_{120}H_{182}N_{38}O_{43}S_6$
Appearance: White lyophilized solid
Molecular Weight: 3036.05 Da
CAS number: [106375-28-4]
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

- **ω-conotoxin MVIIA - #08CON001:** blocks $Ca_v2.2$ channels
- **ω-conotoxin MVIIC - #08CON002:** blocks $Ca_V2.1$ and $Ca_v2.2$ channels
- **ω-agatoxin IVA - #11AGA001:** selective inhibitor of P/Q-type calcium channel (Cav2.1)
- **ω-conotoxin SO3 - #08CON013:** selective inhibitor of N-type voltage-sensitive calcium channels
- **SNX482 - #08SNX001:** selective inhibitor of R-type voltage-sensitive calcium channels

References

- Lew, M. J., Flinn *et al*. (1997) Structure-function relationships of omega-conotoxin GVIA. Synthesis, structure, calcium channel binding, and functional assay of alanine-substituted analogues, *J Biol Chem*
- Sevilla, P *et al*. (1993) Three-dimensional structure of omega-conotoxin GVIA determined by 1H NMR, *Biochem Biophys Res Commun*
- Nishiuchi, Y., *et al*. (1986) Synthesis and secondary-structure determination of omega-conotoxin GVIA: a 27-peptide with three intramolecular disulfide bonds, *Biopolymers*
- Olivera, B. M., *et al.* (1984) Purification and sequence of a presynaptic peptide toxin from Conus geographus venom, *Biochemistry*
- Seiji Ichida *et al*. (2005) Characteristics of Omega-conotoxin GVI A and MVIIC Binding to Cav 2.1 and Cav 2.2 Channels Captured by Anti-Ca2+ Channel Peptide Antibodies, *Neurochemical Research*

For laboratory research use only

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