Product Datasheet

Kaliotoxin 1

Product name: Kaliotoxin 1	**Synonyms :** KTX1
Catalog # : 08KTX002	

Product description

Kaliotoxin-1 (KTX1) has been isolated from the venom of the Scorpion Androctonus mauretanicus mauretanicus. **Kaliotoxin-1** shows a high structural affinity with **Iberiotoxin** and **Charybdotoxin** that inhibit K_{Ca}^{2+} channels activity. According to several studies, it appears that **Kaliotoxin-1** has a weak inhibitory effect on K_{Ca}^{2+} channels, but it is a potent and selective inhibitor of voltage-activated potassium channel ($K_v1.1$, $K_v1.2$, $K_v1.3$).

Product specifications

AA sequence: Gly-Val-Glu-Ile-Asn-Val-Lys-Cys^{8}-Ser-Gly-Ser-Pro-Gln-Cys^{14}-Leu-Lys-Pro-Cys^{18}-Lys-Asp-Ala-Gly-Met-Arg-Phe-Gly-Lys-Cys^{28}-Met-Asn-Arg-Lys-Cys^{33}-His-Cys^{35}-Thr-Pro-Lys-OH
Disulfide bonds: Cys^{8}-Cys^{28}, Cys^{14}-Cys^{33} and Cys^{18}-Cys^{35}
Length (aa): 38
Formula: $C_{171}H_{284}N_{56}O_{48}S_8$
Appearance: White lyophilized solid
Molecular Weight: 4149.04 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

- **Margatoxin - #08MAG001:** blocks $K_v1.3$ (IC_{50} around 30 pM)
- **HsTx1 - #08NEU001:** blocks $K_v1.3$ (Kd around 10 pM)
- **Maurotoxin - #08MAR001:** blocks $K_v1.1$, $K_v1.2$, $K_v1.3$ and SK channels
- **ShK - #08SHK001:** blocks $K_v1.1$, $K_v1.3$, $K_v1.4$ and $K_v1.6$ at subnanomolecular concentrations
- **(Dap^{22})-ShK - #13SHD001:** selective blocker of the voltage-gated potassium channel $K_v1.3$ (IC_{50} ~ 23 pM)
- **ADWX-1 - #13ADW001:** blocks $K_v1.3$ (IC_{50} around 2 pM)

References

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- Lange, A., *et al*. (2006) Toxin-induced conformational changes in a potassium channel revealed by solid-state NMR. *Nature*
- Lange, A., *et al*. (2005) A concept for rapid protein-structure determination by solid-state NMR spectroscopy. *Angew Chem Int Ed Engl*
- Gairi, M., *et al*. (1997) 3D structure of kaliotoxin: is residue 34 a key for channel selectivity? *J Pept Sci*
- Fernandez, I., *et al*. (1994) Kaliotoxin (1-37) shows structural differences with related potassium channel blockers. *Biochemistry*
- Crest, M., *et al*. (1992) Kaliotoxin, a novel peptidyl inhibitor of neuronal BK-type Ca(2+)-activated K+ channels characterized from Androctonus mauretanicus mauretanicus venom. *J Biol Chem*

For laboratory research use only

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