Product Datasheet

ADWX-1

Product name : ADWX-1	**Synonyms :**
Catalog # : 13ADW001	

Product description

ADWX-1 is an optimised synthetic analog of the **scorpion peptide BmKTx**. ADWX-1 is known to block **voltage-gated K_v1.3 channel** with a high affinity (IC_{50} = 1.89 pM) and selectivity (340 fold greater affinity than for voltage-dependent). **ADWX-1** inhibits **$CD4^+$ $CCR7^-$ T-cell proliferation. ADWX-1** is an interesting therapeutic candidate to treat auto-immune disorders such as multiple sclerosis, type-1 diabetes, rheumatoid arthritis and psoriasis. This peptide is a valuable tool for studying the structure-function of K_v1.3 channel and auto-immunity pathways.

Product specifications

AA sequence: Val-Gly-Ile-Asn-Val-Lys-Cys^7-Lys-His-Ser-Arg-Gln-Cys^{13}-Leu-Lys-Pro-Cys^{17}-Lys-Asp-Ala-Gly-Met-Arg-Phe-Gly-Lys-Cys^{27}-Thr-Asn-Gly-Lys-Cys^{32}-His-Cys^{34}-Thr-Pro-Lys-OH
Disulfide bonds Cys^7-Cys^{27}, Cys^{13}-Cys^{32}, Cys^{17}-Cys^{34}
Length (aa): 37
Formula: $C_{169}H_{281}N_{57}O_{46}S_7$
Appearance: White lyophilized solid
Molecular Weight: 4071.90 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

- Kaliotoxin 1 - #08KTX002: potent inhibitor of K_v1.1, K_v1.2, K_v1.3 channels
- Margatoxin - #08MAG001: selective inhibitor of K_v1.3
- HsTx1 - # 08NEU001: inhibits K_v1.3 with a Kd close to 10pM
- Maurotoxin - #08MAR001: inhibits voltage-gated potassium channels and small conductance calcium-activated channels
- ShK - #08SHK001: inhibits potently K_v1.1, K_v1.3 and K_v1.4 channels
- (Dap^{22})-ShK - #13SHD001: selective blocker of the voltage-gated potassium channel K_v1.3 (IC_{50} ~ 23 pM)

References

- Song Han , et al. (2008) Structural Basis of a Potent Peptide Inhibitor Designed for Kv1.3 Channel, a Therapeutic Target of Autoimmune Disease. *JBC*
- Zhi Li, et al.(2012) Selective Inhibition of CCR7− Effector Memory T Cell Activation by a Novel Peptide Targeting Kv1.3 Channel in a Rat Experimental Autoimmune Encephalomyelitis Model. *JBC*
- Yin SJ (2008) Different residues in channel turret determining the selectivity of ADWX-1 inhibitor peptide between Kv1.1 and Kv1.3 channels. *Journal of proteome research*

For laboratory research use only

Smartox Biotechnology – 570 rue de la Chimie – Bâtiment NanoBio – 38400 Saint Martin d'Hères – FRANCE
Phone : +33 4 56 52 08 69 Fax : +33 4 56 52 08 68 contact@smartox-biotech.com