# Product Data Sheet

Product Name: ADWX 1
Cat. No.: GC11315

## Chemical Properties

| | |
|---|---|
| Cas. No. | |
| SMILES | CCC(C(/N=C(O)/C/N=C(O)/C(N)C(C)C)/C(O)=N/C(/C(O)=N/C(/C(O)=N/C(/C(O)=N/C(/C(O)=N\C(/C(O)=N/C(/C(O)=N/C(/C(O)=N/C(/C(O) |
| Formula | $C_{169}H_{281}N_{57}O_{46}S_7$ |
| Solubility | Soluble to 2 mg/ml in Water |
| General tips | For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be |
| Shipping Condition | Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request. |
| Structure | ADWX 1 |

## Background

ADWX 1 is a potent and selective inhibitor of KV1.3 channel with IC50 values of 1.89 pM and 0.65 nM for Kv1.3 and Kv1.1, respectively [1].

Potassium voltage-gated channel (KV1.3 channel) is a potassium channel and plays an important role in regulating Ca2+ signaling and the resting membrane potential. KV1.3 is an attractive target for immunomodulation of T cell-mediated autoimmune diseases [1].

ADWX 1 is a potent and selective KV1.3 channel inhibitor. In the transiently transfected HEK293 cells, ADWX-1 inhibited potassium channel with IC50 values of 1.89 pM and 0.65 nM for Kv1.3 and Kv1.1, respectively [1].

In a rat experimental autoimmune encephalomyelitis (EAE) model, ADWX-1 lowered the clinical scores and significantly reduced inflammatory infiltrates. Also, ADWX-1 reduced the levels of IL-2 and IFN-γ. In MBP-stimulated PBMCs from ADWX-1-treated EAE rats, IL-2 secretion was decreased significantly. In the EAE model, the CD4+CCR7- TEM cells were inhibited by ADWX-1. Also, ADWX-1 inhibited IL-2 secretion by CD4+CCR7- TEM cells through the NF-B- and NF-AT-dependent way [2].

References:
[1]. Han S, Yi H, Yin SJ, et al. Structural basis of a potent peptide inhibitor designed for Kv1.3 channel, a therapeutic target of autoimmune disease. J Biol Chem, 2008, 283(27): 19058-19065.
[2]. Li Z, Liu WH, Han S, et al. Selective inhibition of CCR7(-) effector memory T cell activation by a novel peptide targeting Kv1.3 channel in a rat experimental autoimmune encephalomyelitis model. J Biol Chem, 2012, 287(35): 29479-29494.

***Caution: Product has not been fully validated for medical applications. For research use only.***
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