10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

ADWX-1 Protein
A Blocker $K_V1.3$ K^+Channels
Catalog # PG10041

Specification

ADWX-1 Protein - Product Information

ADWX-1 Protein - Additional Information

Storage
-20°C

Precautions
ADWX-1 Protein is for research use only and not for use in diagnostic or therapeutic procedures.

ADWX-1 Protein - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

ADWX-1 Protein - Images

ADWX-1 Protein - Background

KV1.3 channel is an attractive pharmacological target for immunomodulation of T cell-mediated autoimmune diseases. ADWX-1 peptide is a potent and selective KV1.3 channel blocker. ADWX-1 peptide is a synthetic analog of the scorpion peptide BmKTx. This peptide is based on the natural BmKTX in which three important residues were mutated in a structure-modification strategy to enhance the KV1.3 channel selectivity1. ADWX-1 inhibits KV1.3 channels heterologously expressed in HEK-293 cells. ADWX-1 blocks KV1.3 currents with an IC50 of 0.0019 nM and displays specificity for KV1.3 over KV1.1 and KV1.2 (IC50 values are 0.65 nM). 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 KV1.3 channel and auto-immunity pathways2.

ADWX-1 Protein - References

1 . Han, S.et al. (2008) J. Biol. Chem.283,19058.2 . Li, Z. et al. (2012) J. Biol. Chem.287,29479.