

**ADWX-1 Protein**  
**A Blocker K<sub>v</sub>1.3 K<sup>+</sup> Channels**  
**Catalog # PG10041****Specification**

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**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 Cytometry](#)
- [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 selectivity<sup>1</sup>. ADWX-1 inhibits KV1.3 channels heterologously expressed in HEK-293 cells. ADWX-1 blocks KV1.3 currents with an IC<sub>50</sub> of 0.0019 nM and displays specificity for KV1.3 over KV1.1 and KV1.2 (IC<sub>50</sub> values are 0.65 nM). ADWX-1 inhibits CD4<sup>+</sup> CCR7<sup>-</sup> 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 pathways<sup>2</sup>.

**ADWX-1 Protein - References**

- 1 . Han, S. et al. (2008) J. Biol. Chem. 283, 19058-62. 2 . Li, Z. et al. (2012) J. Biol. Chem. 287, 29479.