



Kv4.3 with KChIP1 Protein Crystal

Catalog: CBCRY08

PRODUCT INFORMATION

Name Kv4.3 with KChIP1 Protein Crystal

Cat No. CBCRY08

Fragment N-terminal domain
Residues 6-145

Protein Description Potassium channel Kv4.3 complexed with regulatory subunit KChIP1

Background

The structure reveals a unique clamping action of the complex, in which a single KChIP1 molecule, as a monomer, laterally clamps two neighboring Kv4.3 N-termini in a 4:4 manner, forming an octamer. The proximal N-terminal peptide of Kv4.3 is sequestered by its binding to an elongated groove on the surface of KChIP1, which is indispensable for the modulation of Kv4.3 by KChIP1, and the same KChIP1 molecule binds to an adjacent T1 domain to stabilize the tetrameric Kv4.3 channels.

Protein Classification membrane protein

Structure Weight 75748.88 Da

Method X-Ray Diffraction

Resolution 3.2 Å

Ligand Chemical Component Calcium ion; Zinc ion

Reference

Wang, H., Yan, Y., Liu, Q., Huang, Y., Shen, Y., Chen, L., Chen, Y., Yang, Q., Hao, Q., Wang, K., Chai, J. (2007) Structural basis for modulation of Kv4 K(+) channels by auxiliary KChIP subunits. *Nat.Neurosci.* 10: 32-39