

Potassium channel Kv4.3 with regulatory subunit KChIP1

Cat. No. CBCRY08 Lot. No. (See product label)

SPECIFICATION

Product Overview

Source	E.coli
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
Polymer	1
Molecule	Kv channel-interacting protein 1
Chain Length	180 amino acids
PDB ID	2NZ0
MMDB ID	43547

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Method	X-Ray Diffraction
Resolution	3.2Å
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

GENE INFORMATION

Gene Name	KCNIP1
Synonyms	KCHIP1; MGC95; VABP; A-type potassium channel modulatory protein 1; potassium channel interacting protein 1; vesicle APC-binding protein; Kv channel interacting protein 1
UniProt ID	Q9NZI2
Chromosome Location	5q35.1
Function	calcium ion binding; potassium channel activity; potassium ion binding; protein binding; voltage-gated ion channel activity
Gene ID	3738

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