

**CACNA1A Blocking Peptide (Center)**  
Synthetic peptide  
Catalog # BP21701c**Specification****CACNA1A Blocking Peptide (Center) - Product Information**Primary Accession [O00555](#)**CACNA1A Blocking Peptide (Center) - Additional Information**

Gene ID 773

**Other Names**

Voltage-dependent P/Q-type calcium channel subunit alpha-1A, Brain calcium channel I, BI, Calcium channel, L type, alpha-1 polypeptide isoform 4, Voltage-gated calcium channel subunit alpha Cav21, CACNA1A, CACH4, CACN3, CACNL1A4

**Target/Specificity**

The synthetic peptide sequence is selected from aa 918-932 of HUMAN CACNA1A

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**CACNA1A Blocking Peptide (Center) - Protein Information**Name CACNA1A ([HGNC:1388](#))

Synonyms CACH4, CACN3, CACNL1A4

**CACNA1A Blocking Peptide (Center) - Background**

Voltage-sensitive calcium channels (VSCC) mediate the entry of calcium ions into excitable cells and are also involved in a variety of calcium-dependent processes, including muscle contraction, hormone or neurotransmitter release, gene expression, cell motility, cell division and cell death. The isoform alpha-1A gives rise to P and/or Q-type calcium currents. P/Q-type calcium channels belong to the 'high-voltage activated' (HVA) group and are blocked by the funnel toxin (Ftx) and by the omega-agatoxin-IVA (omega-Aga-IVA). They are however insensitive to dihydropyridines (DHP), and omega-conotoxin-GVIA (omega-CTx-GVIA).

**CACNA1A Blocking Peptide (Center) - References**

Hans M., et al. *Biophys. J.* 76:1384-1400(1999).  
Ophoff R.A., et al. *Cell* 87:543-552(1996).  
Zhuchenko O., et al. *Nat. Genet.* 15:62-69(1997).  
Toru S., et al. *J. Biol. Chem.* 275:10893-10898(2000).  
Grimwood J., et al. *Nature* 428:529-535(2004).

**Function**

Voltage-sensitive calcium channels (VSCC) mediate the entry of calcium ions into excitable cells and are also involved in a variety of calcium-dependent processes, including muscle contraction, hormone or neurotransmitter release, gene expression, cell motility, cell division and cell death. The isoform alpha-1A gives rise to P and/or Q-type calcium currents. P/Q-type calcium channels belong to the 'high-voltage activated' (HVA) group and are specifically blocked by the spider omega-agatoxin-IVA (AC P54282) (By similarity). They are however insensitive to dihydropyridines (DHP).

**Cellular Location**

Cell membrane; Multi-pass membrane protein

**Tissue Location**

Brain specific; mainly found in cerebellum, cerebral cortex, thalamus and hypothalamus. Expressed in the small cell lung carcinoma cell line SCC-9. No expression in heart, kidney, liver or muscle. Purkinje cells contain predominantly P-type VSCC, the Q-type being a prominent calcium current in cerebellar granule cells

**CACNA1A Blocking Peptide (Center) - Protocols**

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

- [Blocking Peptides](#)