

## PRODUCT INFORMATION

<b>Tag</b>	C-Flag&Strep Tag
<b>Target</b>	CAC1A
<b>Synonyms</b>	APCA, BI, CACNL1A4, CAV2.1, DEE42, EA2, EIEE42, FHM, HPCA, MHP, MHP1, SCA6
<b>Description</b>	Human CAC1A-Strep full length protein-synthetic nanodisc
<b>Delivery</b>	6~8weeks
<b>Uniprot ID</b>	O00555
<b>Expression Host</b>	HEK293
<b>Protein Families</b>	Ion Channels: Calcium
<b>Protein Pathways</b>	N/A
<b>Molecular Weight</b>	The human full length CAC1A-Strep protein has a MW of 282.6 kDa
<b>Formulation &amp; Reconstitution</b>	Lyophilized from nanodisc solubilization buffer (20 mM Tris-HCl, 150 mM NaCl, pH 8.0). Normally 5% - 8% trehalose is added as protectants before lyophilization. Please see Certificate of Analysis for specific instructions. Do not use solvents with a pH below 6.5 or those containing high concentrations of divalent metal ions (greater than 5 mM) in subsequent experiments.
<b>Storage &amp; Shipping</b>	Store at -20°C to -80°C for 12 months in lyophilized form. After reconstitution, if not intended for use within a month, aliquot and store at -80°C (Avoid repeated freezing and thawing). Lyophilized proteins are shipped at ambient temperature.
<b>Background</b>	Voltage-dependent calcium channels 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, and gene expression. Calcium channels are multisubunit complexes composed of alpha-1, beta, alpha-2/delta, and gamma subunits. The channel activity is directed by the pore-forming alpha-1 subunit, whereas, the others act as auxiliary subunits regulating this activity. The distinctive properties of the calcium channel types are related primarily to the expression of a variety of alpha-1 isoforms, alpha-1A, B, C, D, E, and S. This gene encodes the alpha-1A subunit, which is predominantly expressed in neuronal tissue. Mutations in this gene are associated with 2 neurologic disorders, familial hemiplegic migraine and episodic ataxia 2. This gene also exhibits polymorphic variation due to (CAG)n-repeats. Multiple transcript variants encoding different isoforms have been found for this gene. In one set of transcript variants, the (CAG)n-repeats occur in the 3' UTR, and are not associated with any disease. But in another set of variants, an insertion extends the coding region to include the (CAG)n-repeats which encode a polyglutamine tract. Expansion of the (CAG)n-repeats from the normal 4-18 to 21-33 in the coding region is associated with spinocerebellar ataxia 6. [provided by RefSeq, Jul 2016]
<b>Usage</b>	Research use only
<b>Conjugate</b>	Unconjugated

Address: Wuhan institute of  
Biotechnology B7, Biolake No.666  
Gaoxin Road, Wuhan, Hubei, China  
Telephone: +1 2409940618(USA)  
/+86-18062749453(China)  
/+86-400-006-0995(China)

Email: [info@dimabio.com](mailto:info@dimabio.com)  
Website: [www.dimabio.com](http://www.dimabio.com)



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