CACNA1F Antibody – Mouse Monoclonal

PRODUCT OVERVIEW

Product Name	CACNA1F, Monoclonal Antibody
Full Product Name	CACNA1F (Calcium Channel, Voltage-Dependent, L Type, alpha 1F Subunit, AIED, COD3, CORDX, CORDX3, CSNB2, CSNB2A, CSNBX2, Cav1.4, JM8, JMC8, OA2) (AP)
Product Gene Name	anti-CACNA1F antibody
Product Synonym Names	Calcium Channel; Voltage-Dependent; L Type; alpha 1F Subunit; AIED; COD3; CORDX; CORDX3; CSNB2; CSNB2A; CSNBX2; Cav1.4; JM8; JMC8; OA2
Clonality	Monoclonal
Isotype	IgG3,k
Clone Number	1H6
Host	Mouse
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Alkaline Phosphatase (AP).
Purity/Purification	Purified
Specificity	Recognizes CACNA1F.
Preparation and Storage	Store product at 4 degree C. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
OMIM	300071
3D Structure	ModBase 3D Structure for O60840
Immunogen	CACNA1F (NP_005174, 1878aa-1977aa) partial recombinant protein with GST tag. MW of the GST tag alone is 26kD.
Immunogen Sequence	LHVPGTHSDPSHGKRGSADSLVEAVLISEGLGLFARDPRFVALAKQEIADACRLTLDEMDNAASDLLAQGTSSLYSDEESILSRFDEEDLGDEMACVHAL
Conjugate	AP
Product Categories/Family for anti-CACNA1F antibody	Antibodies; Ion Channel
Applications Tested/Suitable for anti-CACNA1F antibody	Western Blot (WB)
Application Notes for anti-CACNA1F antibody	Applications are based on unconjugated antibody.
Related Product Information for anti-CACNA1F antibody	MBS6163891 is an antibody targeting CACNA1F. Also known as CACNA1F (Calcium Channel, Voltage-Dependent, L Type, alpha 1F Subunit, AIED, COD3, CORDX, CORDX3, CSNB2, CSNB2A, CSNBX2, Cav1.4, JM8, JMC8, OA2) (AP). Host: Mouse.

Other Notes	Small volumes of anti-CACNA1F antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CACNA1F. It may not necessarily be applicable to this product.

NCBI GI #	53832007
NCBI GeneID	778
NCBI Accession #	NP_005174
UniProt Primary Accession #	O60840
UniProt Related Accession #	O60840
GenBank Nucleotide #	NP_005174.2
NCBI Official Full Name	voltage-dependent L-type calcium channel subunit alpha-1F isoform 1
NCBI Official Synonym Full Names	calcium voltage-gated channel subunit alpha1 F
NCBI Official Symbol	CACNA1F
NCBI Official Synonym Symbols	JM8; OA2; AIED; COD3; COD4; JMC8; CORDX; CSNB2; CORDX3; CSNB2A; CSNBX2; Cav1.4; Cav1.4alpha1
UniProt Protein Name	Voltage-dependent L-type calcium channel subunit alpha-1F
UniProt Synonym Protein Names	Voltage-gated calcium channel subunit alpha Cav1.4
Protein Family	Voltage-dependent L-type calcium channel
UniProt Gene Name	CACNA1F
UniProt Synonym Gene Names	CACNAF1
UniProt Entry Name	CAC1F_HUMAN
NCBI Protein Information	voltage-dependent L-type calcium channel subunit alpha-1F
NCBI Summary for CACNA1F	This gene encodes a multipass transmembrane protein that functions as an alpha-1 subunit of the voltage-dependent calcium channel, which mediates the influx of calcium ions into the cell. The encoded protein forms a complex of alpha-1, alpha-2/delta, beta, and gamma subunits in a 1:1:1:1 ratio. Mutations in this gene can cause X-linked eye disorders, including congenital stationary night blindness type 2A, cone-rod dystropy, and Aland Island eye disease. Alternatively spliced transcript variants encoding multiple isoforms have been observed. [provided by RefSeq, Aug 2013]

UniProt Comments for CACNA1F	CACNA1F: 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-1F gives rise to L-type calcium currents. Long-lasting (L-type) calcium channels belong to the 'high-voltage activated' (HVA) group. They are blocked by dihydropyridines (DHP), phenylalkylamines, benzothiazepines, and by omega-agatoxin-IIIA (omega-Aga-IIIA). They are however insensitive to omega-conotoxin- GVIA (omega-CTx-GVIA) and omega-agatoxin-IVA (omega-Aga-IVA). Defects in CACNA1F are the cause of congenital stationary night blindness type 2A (CSNB2A). Congenital stationary night blindness is a non-progressive retinal disorder characterized by impaired night vision. Defects in CACNA1F are the cause of cone-rod dystrophy X- linked type 3 (CORDX3). CORDs are inherited retinal dystrophies belonging to the group of pigmentary retinopathies. CORDs are characterized by retinal pigment deposits visible on fundus examination, predominantly in the macular region, and initial loss of cone photoreceptors followed by rod degeneration. This leads to decreased visual acuity and sensitivity in the central visual field, followed by loss of peripheral vision. Severe loss of vision occurs earlier than in retinitis pigmentosa. Defects in CACNA1F are the cause of Aaland island eye disease (AIED); also known as Forsius-Eriksson type ocular albinism. On the Aaland island in the Baltic Sea, AIED is an X-linked recessive retinal disease characterized by a combination of fundus hypopigmentation, decreased visual acuity due to foveal hypoplasia, nystagmus, astigmatism, protan color vision defect, myopia, and defective dark adaptation. Except for progression of axial myopia, the disease can be considered to be a stationary condition. Electroretinography reveals abnormalities in both photopic and scotopic functions. Belongs to the calcium channel alpha-1 subunit (TC 1.A.1.11) family. CACNA1F subfamily. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Membrane protein, multi-pass; Membrane protein, integral Chromosomal Location of Human Ortholog: Xp11.23 Cellular Component: integral to membrane; plasma membrane; voltage-gated calcium channel complex Molecular Function: high voltage-gated calcium channel activity; metal ion binding; voltage-gated calcium channel activity Biological Process: detection of light stimulus involved in visual perception; regulation of T cell receptor signaling pathway; T cell homeostasis; visual perception Disease: Aland Island Eye Disease; Cone-rod Dystrophy, X-linked, 3; Night Blindness, Congenital Stationary, Type 2a
Research Articles on CACNA1F	**1.** Data revealed the presence of intronic and synonymous disease-causing variants leading to miss-splicing of CACNA1F-mediated inherited retinal disorders.
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