Stargazin (CACNG2) Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	Stargazin (CACNG2), Polyclonal Antibody
Full Product Name	Stargazin, CT (Ca2 Gamma Subunit of Voltage-gated Calcium Channel, Cacng2) (MaxLight 405)
Product Gene Name	anti-CACNG2 antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Rat
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight405.
Purity/Purification	Purified by Protein A Affinity Chromatography.
Specificity	Recognizes Stargazin, Mr 36-39kD. Species Crossreactivity: Rat. Predicted to crossreact with mouse based on sequence homology.
Preparation and Storage	Store product at 4 degree C in the dark. 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. Caution: MaxLight405 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	35,966 Da
Chromosome Location	Chromosome: 22; NC_000022.10 (36956916..37098690, complement). Location: 22q13.1
OMIM	602911
3D Structure	ModBase 3D Structure for Q9Y698
Immunogen	KLH-conjugated, synthetic peptide corresponding to amino acids 305-323 (KDSKDSLHANTANRRTTPV) of rat Stargazin.
Conjugate	MaxLight405
Note	Preservative Free
Product Categories/Family for anti-CACNG2 antibody	Antibodies; Ion Channel
Applications Tested/Suitable for anti-CACNG2 antibody	Immunoprecipitation (IP), Western Blot (WB)
Application Notes for anti-CACNG2 antibody	IP: 2-5ug has been reported by an independent laboratory to immunoprecipitate Stargazin in rat P2 lysate. WB: 0.5-2.0ug/ml detects Stargazin in RIPA lysates from rat brain microsomal preparation. Rat brain microsomal preparation was resolved by electrophoresis, transferred to nitrocellulose and probed with anti-Stargazin (0.5ug/ml). Proteins were visualized using a goat anti-rabbit secondary antibody conjugated to HRP and a chemiluminescence detection system. Applications are based on unconjugated antibody.
Related Product Information for anti-CACNG2 antibody	MBS6500874 is an antibody targeting CACNG2. Also known as Stargazin, CT (Ca2 Gamma Subunit of Voltage-gated Calcium Channel, Cacng2) (MaxLight 405). Reactive in Rat. Host: Rabbit.
Product References and Citations for anti-CACNG2 antibody	1. Chen, L., et al., Nature 408: 936-943 (2000). 2. Letts, V.A., et al., Nat. Genet. 19: 340-347 (1998). 3. Qiao. X. and Meng, H.J., Bioenerg. Biomembr. 35: 661-670 (2003).

Other Notes	Small volumes of anti-CACNG2 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 CACNG2. It may not necessarily be applicable to this product.

NCBI GI #	5174405
NCBI GeneID	10369
NCBI Accession #	NP_006069.1
UniProt Primary Accession #	Q9Y698
UniProt Secondary Accession #	Q2M1M1; Q5TGT3; Q9UGZ7
UniProt Related Accession #	Q9Y698
GenBank Nucleotide #	NM_006078.3
NCBI Official Full Name	voltage-dependent calcium channel gamma-2 subunit
NCBI Official Synonym Full Names	calcium channel, voltage-dependent, gamma subunit 2
NCBI Official Symbol	CACNG2
NCBI Official Synonym Symbols	MRD10
UniProt Protein Name	Voltage-dependent calcium channel gamma-2 subunit
UniProt Synonym Protein Names	Neuronal voltage-gated calcium channel gamma-2 subunit; Transmembrane AMPAR regulatory protein gamma-2
Protein Family	Voltage-dependent calcium channel
UniProt Gene Name	CACNG2
UniProt Synonym Gene Names	TARP gamma-2
UniProt Entry Name	CCG2_HUMAN
NCBI Protein Information	voltage-dependent calcium channel gamma-2 subunit; stargazin; TARP gamma-2; transmembrane AMPAR regulatory protein gamma-2; neuronal voltage-gated calcium channel gamma-2 subunit
NCBI Summary for CACNG2	The protein encoded by this gene is a type I transmembrane AMPA receptor regulatory protein (TARP). TARPs regulate both trafficking and channel gating of the AMPA receptors. This gene is part of a functionally diverse eight-member protein subfamily of the PMP-22/EMP/MP20 family. This gene is a susceptibility locus for schizophrenia. [provided by RefSeq, Dec 2010]

UniProt Comments for CACNG2	Function: Regulates the trafficking and gating properties of AMPA-selective glutamate receptors (AMPARs). Promotes their targeting to the cell membrane and synapses and modulates their gating properties by slowing their rates of activation, deactivation and desensitization. Does not show subunit-specific AMPA receptor regulation and regulates all AMPAR subunits. Thought to stabilize the calcium channel in an inactivated (closed) state. Ref.5 Subunit structure: The L-type calcium channel is composed of five subunits: alpha-1, alpha-2/delta, beta and gamma. Interacts with the PDZ domains of DLG4/PSD-95 and DLG1/SAP97. May interact with GOPC By similarity. Acts as an auxiliary subunit for AMPA-selective glutamate receptors (AMPARs). Found in a complex with GRIA1, GRIA2, GRIA3, GRIA4, CNIH2, CNIH3, CACNG3, CACNG4, CACNG5, CACNG7 and CACNG8 By similarity. Interacts with GRIA1. Ref.5 Subcellular location: Membrane; Multi-pass membrane protein. Tissue specificity: Brain. Post-translational modification: Phosphorylation of Thr-321 impairs interaction with DLG1 and DLG4. Involvement in disease: Mental retardation, autosomal dominant 10 (MRD10) [MIM:614256]: A disorder characterized by significantly below average general intellectual functioning associated with impairments in adaptative behavior and manifested during the developmental period.Note: The disease is caused by mutations affecting the gene represented in this entry. Ref.6 Sequence similarities: Belongs to the PMP-22/EMP/MP20 family. CACNG subfamily.
Research Articles on CACNG2	**1.** Autoinactivation is a subunit and splice form dependent property of AMPA receptor-stargazin complexes, which involves structural rearrangements within the complex rather than any physical dissociation.
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