10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

PDE6C Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9728c

Product Information

Application	WB, IHC-P, E
Primary Accession	P51160
Other Accession	Q91ZQ1
Reactivity	Human, Mouse
Predicted	Rat, Rabbit, Chicken, Bovine, Canine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB24356
Calculated MW	99147
Antigen Region	271-300

Additional Information

Gene ID	5146
Other Names	Cone cGMP-specific 3', 5'-cyclic phosphodiesterase subunit alpha', cGMP phosphodiesterase 6C, PDE6C, PDEA2
Target/Specificity	This PDE6C antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 271-300 amino acids from the Central region of human PDE6C.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PDE6C Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PDE6C (HGNC:8787)
Synonyms	PDEA2

Function	Catalytic alpha subunit of the cone-specific cGMP phosphodiesterase (PDE6) complex, which hydrolyzes 3',5'-cyclic GMP as part of the phototransduction cascade. The PDE6 holoenzyme consists of two catalytic alpha subunits (PDE6C) and two inhibitory gamma subunits (PDE6H) (PubMed:21127010, PubMed:28583373, PubMed:39739818). Light- activated GNAT2 relieves gamma subunit-mediated inhibition, allowing the catalytic subunits to hydrolyze cGMP and mediate visual signal transduction and amplification. The resulting decrease in cytosolic cGMP levels triggers the closure of cGMP-gated cation channels at the plasma membrane, leading to hyperpolarization of cone photoreceptors (By similarity). The catalytic site can adopt partially open conformations even in the inhibited state, contributing to the higher basal activity and rapid response kinetics characteristic of cones compared to rods (PubMed:39739818).
Cellular Location	Photoreceptor outer segment membrane {ECO:0000250|UniProtKB:Q91ZQ1}; Lipid-anchor {ECO:0000250|UniProtKB:Q91ZQ1}. Note=Localized in cone outer segment disk membranes. {ECO:0000250|UniProtKB:Q91ZQ1}

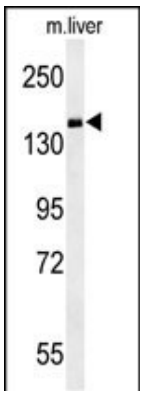
Background

PDE6C is the alpha-prime subunit of cone phosphodiesterase, which is composed of a homodimer of two alpha-prime subunits and 3 smaller proteins of 11, 13, and 15 kDa.

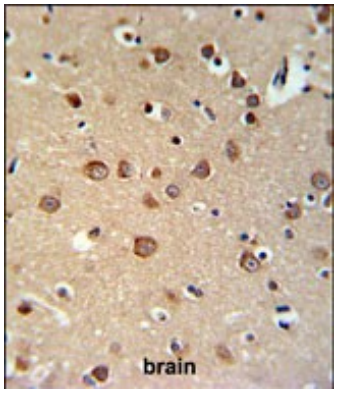
References

Muradov, H., et al. J. Biol. Chem. 284(47):32662-32669(2009) Chang, B., et al. Proc. Natl. Acad. Sci. U.S.A. 106(46):19581-19586(2009) Thiadens, A.A., et al. Am. J. Hum. Genet. 85(2):240-247(2009)

Images



Western blot analysis of PDE6C Antibody (Center) (Cat. #AP9728c) in mouse liver tissue lysates (35ug/lane). PDE6C (arrow) was detected using the purified Pab.



PDE6C Antibody (Center) (Cat. #AP9728c) IHC analysis in formalin fixed and paraffin embedded brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the PDE6C Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.

Citations

- The Deubiquitinating Enzyme Ataxin-3 Regulates Ciliogenesis and Phagocytosis in the Retina
- Ryanodine Receptor 2 Contributes to Impaired Protein Localization in Cyclic Nucleotide-Gated Channel Deficiency.
- cGMP accumulation causes photoreceptor degeneration in CNG channel deficiency: evidence of cGMP cytotoxicity independently of enhanced CNG channel function.
- Preservation of endoplasmic reticulum (ER) Ca stores by deletion of inositol-1,4,5-trisphosphate receptor type 1 promotes ER retrotranslocation, proteostasis, and protein outer segment localization in cyclic nucleotide-gated channel-deficien

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.