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OPN5 Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP50765

Product Information

Application	WB, IF
Primary Accession	Q6U736
Reactivity	Human, Mouse
Host	Rabbit
Clonality	polyclonal
Calculated MW	39727

Additional Information

Gene ID	221391
Other Names	Opsin-5, G-protein coupled receptor 136, G-protein coupled receptor PGR12, Neuropsin, Transmembrane protein 13, OPN5, GPR136, PGR12, TMEM13
Dilution	WB~~ 1:1000 IF~~1:100
Format	Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.09% (W/V) sodium azide and 50% glycerol.
Storage Conditions	-20℃

Protein Information

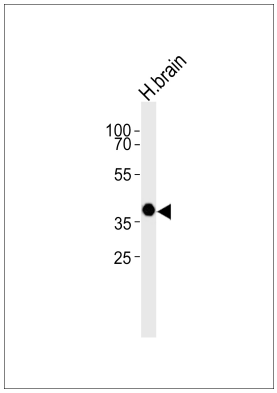
Name	OPN5 (HGNC:19992)
Synonyms	GPR136, PGR12, TMEM13
Function	G protein-coupled photoreceptor that selectively activates G(i) protein in response to light in the retina (By similarity). Activation occurs when the opsin-bound cis-retinal chromophore absorbs a photon and isomerizes to all-trans-retinal, inducing a conformational change in the opsin that triggers a G protein-mediated phototransduction cascade (PubMed:22043319). Acts as a bistable protein with absorption peaks at 380 nm (UVA light) and 470 nm (blue light), allowing photoreversible regeneration of the cis-retinal chromophore after stimulation (PubMed:22043319). Required for the light-response in the inner plexiform layer, and contributes to the regulation of the light-response in the nerve fiber layer, via phosphorylated DAT/SLC6A3 dopamine uptake. Involved in local corneal and retinal circadian rhythm photoentrainment via modulation of the UVA light-induced phase-shift of the retina clock. Acts as a circadian photoreceptor in the outer ear and vibrissal pads, via modulation of circadian clock-gene expression in response to violet light during the light-to-dark transition phase and night phase of the circadian

	cycle. Required in the retina to negatively regulate hyaloid vessel regression during postnatal development via light-dependent OPN5-SLC32A1-DRD2-VEGFR2 signaling. Involved in the light-dependent regulation of retina and vitreous compartment dopamine levels. Mediates violet light-accelerated wound healing in corneas, being transiently expressed following physical injury (By similarity).
Cellular Location	Cell membrane {ECO:0000250|UniProtKB:Q6VZZ7}; Multi-pass membrane protein
Tissue Location	Detected in brain and retina and cell lines derived from neural retina.

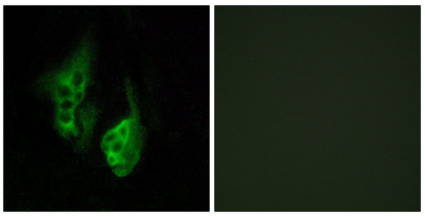
References

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Fredriksson R.,et al.FEBS Lett. 554:381-388(2003).
Vassilatis D.K.,et al.Proc. Natl. Acad. Sci. U.S.A. 100:4903-4908(2003).
Mungall A.J.,et al.Nature 425:805-811(2003).

Images



Western blot analysis of lysate from human brain tissue lysate,using OPN5 Antibody(AP50765). AP50765 was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody.Lysate at 35ug.



Immunofluorescence analysis of HeLa cells, using OPN5 antibody.

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