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GPR136 Rabbit pAb

Catalog # AP99298

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	Q6U736
Other Accession	Q6U736
Predicted	Rat, Human, Mouse, Rabbit, Chicken, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	39727
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human G protein-coupled receptor 136
Epitope Specificity	11-110/354
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the G-protein coupled receptor 1 family. Opsin subfamily.
Post-translational modifications	It is uncertain whether Cys-315 or Cys-316 is palmitoylated.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	GPCR GPR136, also known as Opsin 5, is a member of the guanine nucleotide binding protein (G protein) coupled receptor superfamily. This gene belongs to the seven exon subfamily of mammalian opsin genes that includes peropsin (RRH) and retinal G protein coupled receptor (RGR). Like these other seven exon opsin genes, this gene may encode a protein with photoisomerase activity. Alternative splicing results in multiple transcript variants encoding different isoforms. ESTs for the GPR136 gene have been identified from human normal testis and B cell/lung/testis libraries..

Additional Information

Gene ID	221391
Other Names	OPN5_HUMAN; OPN5; G-protein coupled receptor 136; G-protein coupled receptor PGR12; Neuropsin; Transmembrane protein 13; GPR136; PGR12; TMEM13; OPN5_MOUSE; Q7TQN6_RAT; opsin 5
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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.

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