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Bestrophin 2 Rabbit pAb

Catalog # AP99632

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	Q8NFU1
Other Accession	Q8NFU1
Predicted	Rat, Human, Mouse, Rabbit, Dog, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	57139
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Bestrophin 2
Epitope Specificity	101-200/509
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 bestrophin family.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The Bestrophins are a newly described family of anion channels unrelated in primary sequence to any previously characterized channel proteins. Bestrophins were originally defined as a family of over 20 related sequences of the C. elegans. The first mammalian Bestrophin was identified as the vitelliform macular dystrophy (VMD), 1 also known as Best disease. Three more members of the bestrophin family members were cloned and indentified recently, Bestrophin 2, 3 and 4. RT PCR analyses revealed tissue restricted expression of the three genes with both Bestrophin 1 and Bestrophin 2 are abundantly transcribed in colon. Functionally the bestrophines oligomerise to form tetramers and pentamers in order to act as calcium sensitive chloride channels. It has been shown that Bestrophin interacts with beta catalytic subunit of protein phosphatase 2A (PP2Ac). Such protein protein interaction between Bestrophin and PP2Ac and the structural subunit of PP2A, PR65, was confirmed by reciprocal immunoprecipitation. The interaction between PP2Ac and the Bestrophin takes place near the carboxy terminal end of the protein.

Additional Information

Gene ID	54831
Other Names	VMD2L1; BEST2_HUMAN; BEST2; Vitelliform macular dystrophy 2-like protein 1; Q6H1U9_MOUSE; BEST2_MOUSE; bestrophin 2; vitelliform macular dystrophy 2-like 1
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	BEST2 (HGNC:17107)
Synonyms	VMD2L1
Function	Ligand-gated anion channel that allows the movement of anions across cell membranes when activated by calcium (Ca2+) (PubMed:11904445, PubMed:18400985, PubMed:32251414, PubMed:35789156, PubMed:36289327). Transports a large specter of anions, namely mediates the movement of chloride, L-glutamate and iodide (PubMed:11904445, PubMed:18400985, PubMed:32251414, PubMed:35789156, PubMed:36289327). Calcium-binding triggers the dilation of the aperture, but calcium- dependent gating is only effective when the size of the passing anion is bigger than the closed aperture (By similarity). Mediates the calcium-activated hydrogencarbonate movement and participates in colonic hydrogencarbonate secretion concomitant with mucin secretion (By similarity). In non-pigmented epithelium (NPE), mediates the efflux of intracellular L-glutamate; binding of intracellular L-glutamate activates and open both the neck and the aperture of the channel, leading to L-glutamate exit promoting chloride influx movement from the extracellular side in trans (PubMed:36289327). Also exhibits a directional permeability for intracellular glutamine, in a similar manner as for L-glutamate (PubMed:36289327).
Cellular Location	Cell membrane {ECO:0000250|UniProtKB:E1BF86}; Multi-pass membrane protein. Basolateral cell membrane; Multi-pass membrane protein
Tissue Location	Mainly confined to the retinal pigment epithelium (PubMed:12032738). Expressed in colon (PubMed:12032738, PubMed:20407206).

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