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Product datasheet for TA328716

Best1 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	FC, IHC, WB
Recommended Dilution:	WB: 1:200-1:2000; IHC: 1:100-1:3,000; FC: 1:50-1:600
Reactivity:	Human, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)NPNKDYPGHEMD, corresponding to amino acid residues 259-270 of mouse Bestrophin-1.Â 3rd extracellular loop.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: Phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.025% NaN3.
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	bestrophin 1
Database Link:	NP_036043 Entrez Gene 7439 HumanEntrez Gene 293735 Rat O88870

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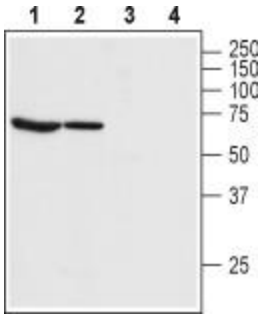
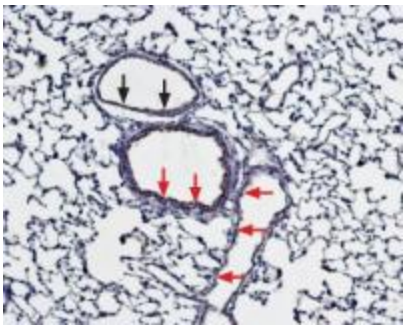
Background: Mammalian Cl channels can be broadly classified into four different families: voltage-dependent Cl channels (CLCs), the cystic fibrosis transmembrane conductance regulator (CFTR), ligand-gated Cl channels (?-aminobutyric acid (GABA)) and glycine channels) and Ca2+-activated Cl channels (Bestrophin and Anoctamin channels). Bestrophins were first found by genetic linkage of human-Bestrophin-1 (hBest1) to a juvenile form of macular degeneration called Best vitelliform macular dystrophy (BVMD). BVMD is mainly electrophysiologically characterized by a decrease in the light peak and physiologically by the thinning of the retina layer which eventually leads to the loss of central vision. To date Bestrophin 1-4 have been identified, although Bestrophin-3 and Bestrophin-4 have been observed only at the RNA level. In addition, splice variants of some of these Ca2+-activated Cl channels (CaCCs) have also been detected. CaCCs are known to be involved in the regulation of olfaction, taste, phototransduction, and excitability in the nervous system. Recently, Bestrophin-1 was shown to be functionally expressed in astrocytes in both primary cell culture and in situ. Bestrophin-1 is also detected in retina, brain, spinal cord and testes. Two different topologies for Bestrophin-1 have been proposed. The first, the preferred structure, proposes that six hydrophobic domains span the membrane, while the second suggests that there are only four membrane-spanning domains. Bestrophin-1, along with its counterparts, is activated by intracellular Ca2+. A recent study demonstrated that Bestrophin-1 indeed binds Ca2+ and by mutating specific residues, showed which amino acid residues are essential for binding Ca2+, providing additional evidence that Bestrophin-1 is activated by direct binding of Ca2+ to the channel. Bestrophin-1 has been found to release glutamate from astrocytes and is located at microdomains near synapses.

Synonyms: ARB; BEST; BMD; RP50; TU15B; VMD2

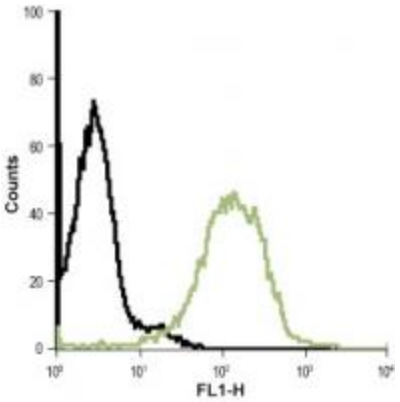
Product images:



Western blot analysis of rat lung (lanes 1 and 3) and rat eye (lanes 2 and 4) lysate: 1, 2. Anti-Bestrophin-1 (extracellular) antibody, (1:200). 3, 4. Anti-Bestrophin-1 (extracellular) antibody, preincubated with the control peptide antigen.



Expression of Bestrophin-1 in rat lung. Immunohistochemical staining of paraffin embedded rat lung sections using Anti-Bestrophin-1 (extracellular) antibody, (1:100). Bestrophin-1 is expressed both in the respiratory epithelium (red arrows) and in vascular smooth muscle (black arrows). Hematoxilin is used as the counterstain.



Indirect flow cytometry analysis in live intact Jurkat (human T cell leukemia) cell line: black line, Control cells + goat-anti-rabbit-FITC.green line, Cells + Anti-Bestrophin-1 (extracellular) antibody, (1:20) + goat-anti-rabbit-FITC.