

Bestrophin-2 (K-15): sc-74339

BACKGROUND

Bestrophin-2, also known as BEST2 or VMD2L1 (vitelliform macular dystrophy 2-like protein 1), is a 509 amino acid member of the bestrophin family of proteins. Members of the bestrophin family are transmembrane proteins that contain a high percentage of aromatic residues, a conserved RFP (Arg-Phe-Pro) motif and they function as anion channels. Bestrophin-2 forms a calcium-sensitive chloride channel located within the cell membrane. It is also believed that Bestrophin-2 channels may also conduct other physiological anions such as bicarbonate. Bestrophin-2 is mainly expressed in retinal pigment epithelium and colon.

REFERENCES

1. Stöhr, H., Marquardt, A., Nanda, I., Schmid, M. and Weber, B.H. 2002. Three novel human VMD2-like genes are members of the evolutionary highly conserved RFP-TM family. *Eur. J. Hum. Genet.* 10: 281-284.
2. Sun, H., Tsunenari, T., Yau, K.W. and Nathans, J. 2002. The vitelliform macular dystrophy protein defines a new family of chloride channels. *Proc. Natl. Acad. Sci. USA* 99: 4008-4013.
3. Tsunenari, T., Sun, H., Williams, J., Cahill, H., Smallwood, P., Yau, K.W. and Nathans, J. 2003. Structure-function analysis of the bestrophin family of anion channels. *J. Biol. Chem.* 278: 41114-41125.
4. Qu, Z., Fischmeister, R. and Hartzell, C. 2004. Mouse bestrophin-2 is a bona fide Cl⁻ channel: identification of a residue important in anion binding and conduction. *J. Gen. Physiol.* 123: 327-340.
5. Qu, Z. and Hartzell, C. 2004. Determinants of anion permeation in the second transmembrane domain of the mouse bestrophin-2 chloride channel. *J. Gen. Physiol.* 124: 371-382.
6. Qu, Z., Chien, L.T., Cui, Y. and Hartzell, H.C. 2006. The anion-selective pore of the bestrophins, a family of chloride channels associated with retinal degeneration. *J. Neurosci.* 26: 5411-5419.
7. Pifferi, S., Pascarella, G., Boccaccio, A., Mazzatenta, A., Gustinich, S., Menini, A. and Zucchelli, S. 2006. Bestrophin-2 is a candidate calcium-activated chloride channel involved in olfactory transduction. *Proc. Natl. Acad. Sci. USA* 103: 12929-12934.

CHROMOSOMAL LOCATION

Genetic locus: BEST2 (human) mapping to 19p13.2; Best2 (mouse) mapping to 8 C3.

SOURCE

Bestrophin-2 (K-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of Bestrophin-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-74339 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Bestrophin-2 (K-15) is recommended for detection of Bestrophin-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Bestrophin-2 (K-15) is also recommended for detection of Bestrophin-2 in additional species, including canine.

Suitable for use as control antibody for Bestrophin-2 siRNA (h): sc-72639, Bestrophin-2 siRNA (m): sc-72640, Bestrophin-2 shRNA Plasmid (h): sc-72639-SH, Bestrophin-2 shRNA Plasmid (m): sc-72640-SH, Bestrophin-2 shRNA (h) Lentiviral Particles: sc-72639-V and Bestrophin-2 shRNA (m) Lentiviral Particles: sc-72640-V.

Molecular Weight of Bestrophin-2: 57 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.