

Bestrophin-4 (C-19): sc-82544

BACKGROUND

Bestrophin-4, also known as BEST4 or VMD2L2 (Vitelliform macular dystrophy 20-like protein 2), is a 473 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-4 acts as a calcium-sensitive chloride channel located in the cell membrane. It is believed that Bestrophin-4 also acts as a channel for other physiologically significant anions, such as bicarbonate. Bestrophin-4 is predominantly expressed in the colon, but can be found at low levels in testis, placenta, trachea, spinal chord, lung and retina.

REFERENCES

1. Marmorstein, A.D., et al. 2000. Bestrophin, the product of the Best vitelliform macular dystrophy gene (VMD2), localizes to the basolateral plasma membrane of the retinal pigment epithelium. *Proc. Natl. Acad. Sci. USA* 97: 12758-12763.
2. Stöhr, H., et al. 2002. Three novel human VMD2-like genes are members of the evolutionary highly conserved RFP-TM family. *Eur. J. Hum. Genet.* 10: 281-284.
3. Tsunenari, T., et al. 2003. Structure-function analysis of the Bestrophin family of anion channels. *J. Biol. Chem.* 278: 41114-41125.
4. Tsunenari, T., et al. 2006. Ca²⁺-activated Cl⁻ current from human Bestrophin-4 in excised membrane patches. *J. Gen. Physiol.* 127: 749-754.
5. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 607336. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: BEST4 (human) mapping to 1p34.1.

SOURCE

Bestrophin-4 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of Bestrophin-4 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-82544 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

PROTOCOLS

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

APPLICATIONS

Bestrophin-4 (C-19) is recommended for detection of Bestrophin-4 of 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); non cross-reactive with family members Bestrophin, Bestrophin-2, or Bestrophin-3.

Suitable for use as control antibody for Bestrophin-4 siRNA (h): sc-72643, Bestrophin-4 shRNA Plasmid (h): sc-72643-SH and Bestrophin-4 shRNA (h) Lentiviral Particles: sc-72643-V.

Molecular Weight (predicted) of Bestrophin-4: 53 kDa.

Molecular Weight (observed) of Bestrophin-4: 59 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

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.

SELECT PRODUCT CITATIONS

1. Ito, G., et al. 2013. Lineage-specific expression of bestrophin-2 and bestrophin-4 in human intestinal epithelial cells. *PLoS One* 8: e79693.

RESEARCH USE

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