

Bestrophin-2 (B-5): sc-376660

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., 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.
2. Sun, H., et al. 2002. The vitelliform macular dystrophy protein defines a new family of chloride channels. *Proc. Natl. Acad. Sci. USA* 99: 4008-4013.
3. Tsunenari, T., et al. 2003. Structure-function analysis of the Bestrophin family of anion channels. *J. Biol. Chem.* 278: 41114-41125.
4. Qu, Z., et al. 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., et al. 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., et al. 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., et al. 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 (B-5) is a mouse monoclonal antibody raised against amino acids 322-509 mapping at the C-terminus of Bestrophin-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Bestrophin-2 (B-5) is recommended for detection of Bestrophin-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

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.

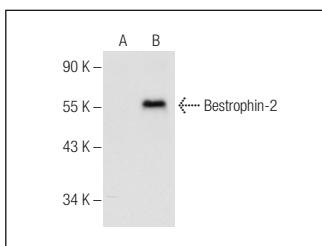
Molecular Weight of Bestrophin-2: 57 kDa.

Positive Controls: Bestrophin-2 (m): 293T Lysate: sc-118796 or Y79 cell lysate: sc-2240.

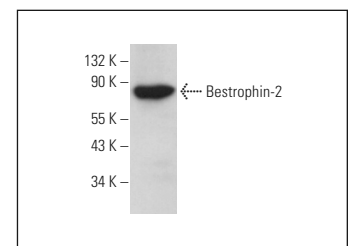
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Bestrophin-2 (D-7): sc-376660. Western blot analysis of Bestrophin-2 expression in non-transfected: sc-117752 (A) and mouse Bestrophin-2 transfected: sc-118796 (B) 293T whole cell lysates.



Bestrophin-2 (B-5): sc-376660. Western blot analysis of Bestrophin-2 expression in Y79 whole cell lysate.

RESEARCH USE

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

PROTOCOLS

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