

# Bestrophin-2 (D-7): sc-376351

## 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<sup>-</sup> 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

Bestrophin-2 (D-7) 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 IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Bestrophin-2 (D-7) is available conjugated to agarose (sc-376351 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376351 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376351 PE), fluorescein (sc-376351 FITC), Alexa Fluor<sup>®</sup> 488 (sc-376351 AF488), Alexa Fluor<sup>®</sup> 546 (sc-376351 AF546), Alexa Fluor<sup>®</sup> 594 (sc-376351 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-376351 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-376351 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-376351 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

Bestrophin-2 (D-7) 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.

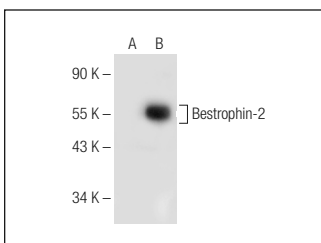
Molecular Weight of Bestrophin-2: 57 kDa.

Positive Controls: Bestrophin-2 (m): 293T Lysate: sc-118796.

## 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<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



Bestrophin-2 (D-7): sc-376351. 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.

## 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](http://www.scbt.com) for detailed protocols and support products.