

# Bestrophin-4 (S-20): sc-82547

## 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

- Marmorstein, A.D., Marmorstein, L.Y., Rayborn, M., Wang, X., Hollyfield, J.G. and Petrukhin, K. 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.
- 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.
- 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.
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- 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 (S-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a 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-82547 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.

## APPLICATIONS

Bestrophin-4 (S-20) 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.

Bestrophin-4 (S-20) is also recommended for detection of Bestrophin-4 in additional species, including equine, canine, bovine and porcine.

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.

## 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) or our catalog for detailed protocols and support products.