

Bestrophin-4 (O-21): sc-130974

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.
- Tsunenari, T., Nathans, J. and Yau, K.W. 2006. Ca²⁺-activated Cl⁻ current from human bestrophin-4 in excised membrane patches. *J. Gen. Physiol.* 127: 749-754.
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CHROMOSOMAL LOCATION

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

SOURCE

Bestrophin-4 (O-21) is a Protein A purified rabbit polyclonal antibody raised against synthetic Bestrophin-4 peptide of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

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 (O-21) is recommended for detection of Bestrophin-4 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

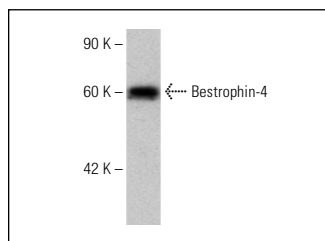
Molecular Weight (observed) of Bestrophin-4: 59 kDa.

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 goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



Bestrophin-4 (O-21): sc-130974. Western blot analysis of Bestrophin-4 expression in Hep G2 whole cell lysate.

RESEARCH USE

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