SANTA CRUZ BIOTECHNOLOGY, INC.

Bestrophin-3 (H-41): sc-135233

BACKGROUND

Bestrophin-3, also known as BEST3 or VMD2L3 (vitelliform macular dystrophy 20-like protein 3), is a 668 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. Expressed predominantly in skeletal muscle but also found in spinal cord, brain, testis, thymus, retina and bone marrow, Bestrophin-3 forms calcium-sensitive chloride channels. In addition, Bestrophin-3 contains an AI (auto-inhibitory) domain that is capable of regulating the anion channel activity. Due to alternative splicing events, three isoforms exist for Bestrophin-3.

REFERENCES

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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. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607337. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Tsunenari, T., et al. 2003. Structure-function analysis of the bestrophin family of anion channels. J. Biol. Chem. 278: 41114-41125.
5. Duta, V., et al. 2004. The role of bestrophin in airway epithelial ion transport. FEBS Lett. 577: 551-554.
6. Chien, L.T., et al. 2006. Single Cl^- channels activated by Ca^{2+} in *Drosophila* S2 cells are mediated by bestrophins. J. Gen. Physiol. 128: 247-259.
7. Qu, Z., et al. 2006. A short motif in the C-terminus of mouse bestrophin 3 corrected inhibits its activation as a Cl channel. FEBS Lett. 580: 2141-2146.
8. Qu, Z.Q., et al. 2007. Activation of bestrophin Cl^- channels is regulated by C-terminal domains. J. Biol. Chem. 282: 17460-17467.
9. Milenkovic, V.M., et al. 2008. Molecular evolution and functional divergence of the bestrophin protein family. BMC Evol. Biol. 8: 72.

CHROMOSOMAL LOCATION

Genetic locus: BEST3 (human) mapping to 12q15; Best3 (mouse) mapping to 10 D2.

SOURCE

Bestrophin-3 (H-41) is a rabbit polyclonal antibody raised against amino acids 161-201 mapping within an internal region of Bestrophin-3 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.

APPLICATIONS

Bestrophin-3 (H-41) is recommended for detection of Bestrophin-3 of mouse, rat and 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)], 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).

Bestrophin-3 (H-41) is also recommended for detection of Bestrophin-3 in additional species, including equine, canine, bovine and porcine.

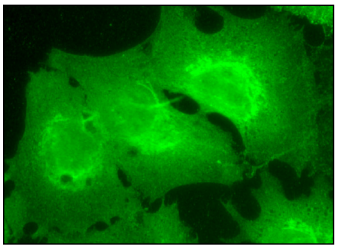
Suitable for use as control antibody for Bestrophin-3 siRNA (h): sc-72641, Bestrophin-3 siRNA (m): sc-72642, Bestrophin-3 shRNA Plasmid (h): sc-72641-SH, Bestrophin-3 shRNA Plasmid (m): sc-72642-SH, Bestrophin-3 shRNA (h) Lentiviral Particles: sc-72641-V and Bestrophin-3 shRNA (m) Lentiviral Particles: sc-72642-V.

Molecular Weight of Bestrophin-3: 47 kDa.

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). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Bestrophin-3 (H-41): sc-135233. Immunofluorescence staining of formalin-fixed HepG2 cells showing membrane localization.

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.