

TRPV5 (B-6): sc-398853

BACKGROUND

Transient receptor potential (TRP) proteins are cation-sensitive channels that modulate a myriad of cellular functions, including temperature sensation and vasoregulation. Transcribed from a gene adjacent to VR-1, the thermal-sensitive, capsaicin-insensitive TRPV3 is expressed at warm temperatures; expression increases in response to noxious temperatures. Human TRPV3 is expressed in skin, tongue, dorsal root ganglion, trigeminal ganglion, spinal cord and brain. In addition, TRPV3 is co-expressed in dorsal root ganglion neurons with VR-1. TRPV3 associates with VR-1 and may modulate VR-1 activity. The 729 amino acid TRPV5 (ECAC1) protein comprises six transmembrane domains, multiple potential phosphorylation sites, an N-linked glycosylation site and three ankyrin repeat regions. It is abundantly expressed in kidney, jejunum and pancreas, and at lower levels in testis, prostate, placenta, brain, colon and rectum. TRPV5 controls the rate-limiting step of vitamin D₃-regulated Ca²⁺ reabsorption in kidney and intestine; the 5'-flanking region of TRPV5 contains four putative vitamin D₃-responsive elements.

REFERENCES

1. Muller, D., et al. 2000. Gene structure and chromosomal mapping of human epithelial calcium channel. *Biochem. Biophys. Res. Commun.* 275: 47-52.
2. Xu, H., et al. 2002. TRPV3 is a calcium-permeable temperature-sensitive cation channel. *Nature* 418: 181-186.
3. Smith, G.D., et al. 2002. TRPV3 is a temperature-sensitive vanilloid receptor-like protein. *Nature* 418: 186-190.
4. Peier, A.M., et al. 2002. A heat-sensitive TRP channel expressed in keratinocytes. *Science* 296: 2046-2049.

CHROMOSOMAL LOCATION

Genetic locus: TRPV5 (human) mapping to 7q34; Trpv5 (mouse) mapping to 6 B2.1.

SOURCE

TRPV5 (B-6) is a mouse monoclonal antibody raised against amino acids 631-729 mapping at the C-terminus of TRPV5 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TRPV5 (B-6) is available conjugated to agarose (sc-398853 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398853 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398853 PE), fluorescein (sc-398853 FITC), Alexa Fluor[®] 488 (sc-398853 AF488), Alexa Fluor[®] 546 (sc-398853 AF546), Alexa Fluor[®] 594 (sc-398853 AF594) or Alexa Fluor[®] 647 (sc-398853 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-398853 AF680) or Alexa Fluor[®] 790 (sc-398853 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

TRPV5 (B-6) is recommended for detection of TRPV5 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 TRPV5 siRNA (h): sc-42676, TRPV5 siRNA (m): sc-42677, TRPV5 shRNA Plasmid (h): sc-42676-SH, TRPV5 shRNA Plasmid (m): sc-42677-SH, TRPV5 shRNA (h) Lentiviral Particles: sc-42676-V and TRPV5 shRNA (m) Lentiviral Particles: sc-42677-V.

Molecular Weight of TRPV5 core: 75 kDa.

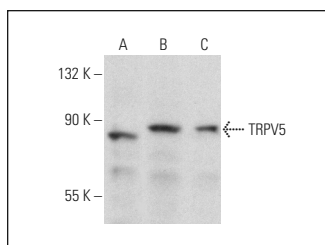
Molecular Weight of glycosylated TRPV5: 85-100 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224, F9 cell lysate: sc-2245 or Neuro-2A whole cell lysate: sc-364185.

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



TRPV5 (B-6): sc-398853. Western blot analysis of TRPV5 expression in Caki-1 (A), Neuro-2A (B) and F9 (C) 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 for detailed protocols and support products.