

# TRPV3 (K-16): sc-23372

## 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 6 transmembrane domains, multiple potential phosphorylation sites, an N-linked glycosylation site and 3 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 Ca<sup>2+</sup> reabsorption in kidney and intestine; the 5'-flanking region of TRPV5 contains four putative vitamin D3-responsive elements.

## REFERENCES

- Muller, D., Hoenderop, J.G., Merx, G.F., van Os, C.H. and Bindels, R.J. 2000. Gene structure and chromosomal mapping of human epithelial calcium channel. *Biochem. Biophys. Res. Commun.* 275: 47-52.
- Smith, G.D., Gunthorpe, M.J., Kelsell, R.E., Hayes, P.D., Reilly, P., Facer, P., Wright, J.E., Jerman, J.C., Walhin, J.p., Ooi, L., Egerton, J., Charles, K.J., Smart, D., Randall, A.D., Anand, P. and Davis, J.B. 2000. TRPV3 is a temperature-sensitive vanilloid receptor-like protein. *Nature* 418: 186-190.
- Peier, A.M., Reeve, A.J., Andersson, D.A., Moqrich, A., Earley, T.J., Hegarden, A.C., Story, G.M., Colley, S., Hogenesch, J.B., McIntyre, P., Bevan, S. and Patapoutian, A. 2002. A heat-sensitive TRP channel expressed in keratinocytes. *Science* 296: 2046-2049.

## CHROMOSOMAL LOCATION

Genetic locus: TRPV5 (human) mapping to 7q31.1; Trpv5 (mouse) mapping to 6 B2.1.

## SOURCE

TRPV3 (K-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of TRPV3 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-23372 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

TRPV3 (K-16) is recommended for detection of TRPV3 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).

TRPV3 (K-16) is also recommended for detection of TRPV3 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for TRPV3 siRNA (h): sc-44170, TRPV3 siRNA (m): sc-45407, TRPV3 shRNA Plasmid (h): sc-44170-SH, TRPV3 siRNA Plasmid (m): sc-45407-SH, TRPV3 shRNA (h) Lentiviral Particles: sc-44170-V and TRPV3 siRNA (m) Lentiviral Particles: sc-45407-V.

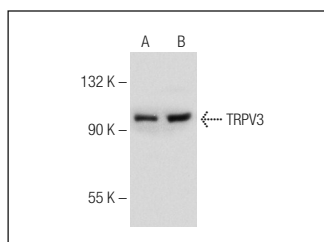
Molecular Weight of TRPV3: 117 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209 or T98G cell lysate: sc-2294.

## 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 Blotting 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 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.

## DATA



TRPV3 (K-16): sc-23372. Western blot analysis of TRPV3 expression in HL-60 (A) and T98G (B) whole cell lysates.

## RESEARCH USE

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