

# TRPV5 (R-98): sc-30187

## 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 D<sub>3</sub>-regulated Ca<sup>2+</sup> reabsorption in kidney and intestine; the 5'-flanking region of TRPV5 contains four putative vitamin D<sub>3</sub>-responsive elements.

## CHROMOSOMAL LOCATION

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

## SOURCE

TRPV5 (R-98) is a rabbit polyclonal antibody raised against amino acids 626-723 mapping at the C-terminus of TRPV5 of rat origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

TRPV5 (R-98) is recommended for detection of TRPV5 of mouse, rat and, to a lesser extent, 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).

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.

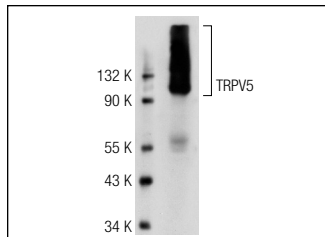
Molecular Weight of glycosylated TRPV5: 85-100 kDa.

Positive Controls: mouse liver extract: sc-2256 or mouse kidney extract: sc-2255.

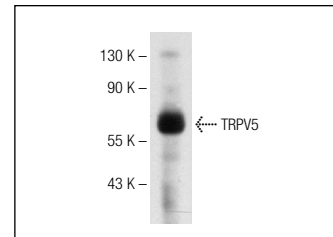
## RECOMMENDED SECONDARY REAGENTS

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



TRPV5 (R-98): sc-30187. Western blot analysis of TRPV5 expression in mouse liver tissue extract.



TRPV5 (R-98): sc-30187. Western blot analysis of TRPV5 expression in mouse kidney tissue extract.

## SELECT PRODUCT CITATIONS

1. Xi, Q., et al. 2010. Adenovirus-delivered microRNA targeting the vitamin D receptor reduces intracellular Ca<sup>2+</sup> concentrations by regulating the expression of Ca<sup>2+</sup>-transport proteins in renal epithelial cells. *BJU Int.* 107: 1314-1319.
2. Wilkens, M.R., et al. 2010. Gastrointestinal calcium absorption in sheep is mostly insensitive to an alimentary induced challenge of calcium homeostasis. *Comp. Biochem. Physiol. B, Biochem. Mol. Biol.* 158: 199-207.
3. Wilkens, M.R., et al. 2012. In contrast to sheep, goats adapt to dietary calcium restriction by increasing intestinal absorption of calcium. *Comp. Biochem. Physiol., Part A Mol. Integr. Physiol.* 163: 396-406.
4. Radhakrishnan, V.M., et al. 2013. Post-translational loss of renal TRPV5 calcium channel expression, Ca<sup>2+</sup> wasting, and bone loss in experimental colitis. *Gastroenterology* 145: 613-624.

## RESEARCH USE

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



Try **TRPV5 (B-6): sc-398853** or **TRPV5 (B-8): sc-398345**, our highly recommended monoclonal alternatives to TRPV5 (R-98).