

VRL-1 (H-105): sc-30155

BACKGROUND

Transient receptor potential (TRP) ion channels are a superfamily of six transmembrane segment-spanning, gated cation channels. TRP subtypes mediate store-operated Ca^{2+} entry, a process involving Ca^{2+} influx and replenishment of Ca^{2+} stores formerly emptied through the action of inositol 1, 4, 5-trisphosphate production and other Ca^{2+} mobilizing agents. TRP ion channels influence calcium-depletion induced calcium influx processes in response to chemo-, mechano- and osmo-regulatory events. A subset of TRP channels includes the vanilloid receptor-1 (VR1), VRL-1 and TRPM8, which are involved in temperature perception. VR1 is activated by temperatures exceeding 43 degrees Celsius and by capsaicin, the main ingredient in hot chili peppers. VRL-1 is activated by extreme temperatures exceeding 52 degrees Celsius and is expressed in both neuronal and nonneuronal cells. TRPM8 is stimulated by cold temperatures below 22 degrees Celsius as well as methanol. TRPM8 is expressed in a subpopulation of pain and temperature-sensing dorsal root ganglia (DRG) neurons.

REFERENCES

1. Philipp, S., et al. 1998. A novel capacitative calcium entry channel expressed in excitable cells. *EMBO J.* 17: 4274-4282.
2. Caterina, M.J., et al. 1999. A capsaicin-receptor homologue with a high threshold for noxious heat. *Nature* 398: 436-441.

CHROMOSOMAL LOCATION

Genetic locus: TRPV2 (human) mapping to 17p11.2; Trpv2 (mouse) mapping to 11 B2.

SOURCE

VRL-1 (H-105) is a rabbit polyclonal antibody raised against amino acids 1-105 mapping at the N-terminus of VRL-1 of human origin.

PRODUCT

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

APPLICATIONS

VRL-1 (H-105) is recommended for detection of VRL-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 VRL-1 siRNA (h): sc-42678, VRL-1 siRNA (m): sc-42679, VRL-1 shRNA Plasmid (h): sc-42678-SH, VRL-1 shRNA Plasmid (m): sc-42679-SH, VRL-1 shRNA (h) Lentiviral Particles: sc-42678-V and VRL-1 shRNA (m) Lentiviral Particles: sc-42679-V.

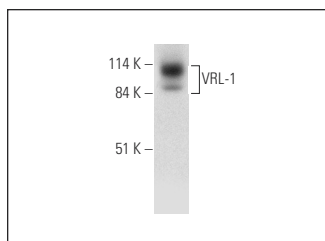
Molecular Weight of VRL-1: 86 kDa.

Positive Controls: mouse cerebellum extract: sc-2403 or Jurkat whole cell lysate: sc-2204.

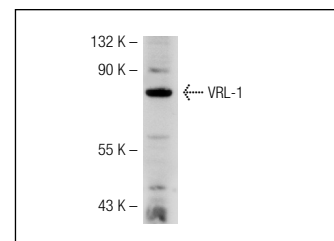
RECOMMENDED SECONDARY REAGENTS

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



VRL-1 (H-105): sc-30155. Western blot analysis of VRL-1 expression in Jurkat whole cell lysate.



VRL-1 (H-105): sc-30155. Western blot analysis of VRL-1 expression in mouse cerebellum tissue extract.

SELECT PRODUCT CITATIONS

1. Zhang, D., et al. 2011. Mast-cell degranulation induced by physical stimuli involves the activation of transient-receptor-potential channel TRPV. *Physiol. Res.* 61: 113-124.
2. Catanzaro, G., et al. 2011. Effect of capacitation on the endocannabinoid system of mouse sperm. *Mol. Cell. Endocrinol.* 343: 88-92.
3. Pucci, M., et al. 2012. Endocannabinoids stimulate human melanogenesis via type-1 cannabinoid receptor. *J. Biol. Chem.* 287: 15466-15478.
4. Lewis, S.E., et al. 2012. Differences in the endocannabinoid system of sperm from fertile and infertile men. *PLoS ONE* 7: e47704.

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.



Try **VRL-1 (G-4): sc-390439** or **VRL-1 (B-9): sc-514848**, our highly recommended monoclonal alternatives to VRL-1 (H-105).