SANTA CRUZ BIOTECHNOLOGY, INC.

VR1 (C-15): sc-12503

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Vanilloid receptor 1 (VR1), also designated capsaicin receptor, is a nonselective cation channel, structurally related to members of the TRP family of ion channels. VR1 is activated by capsaicin, the active ingredient in chili peppers, by heat and by an increase in protons at sites of infection, inflammation and ischemia. By creating moderately acidic conditions, protons are able to lower the temperature threshold for VR1 activation, thus identifying VR1 as a molecular integrator of chemical and physical stimuli that elicit pain. VR1 is expressed in primary sensory neurons and vagal nerves and activated VR1 induces the influx of cations, particularly Ca^{2+} and Na^{+} ions. The vanilloid receptor may also be a molecular target for endogenous anandamide, in addition to the cannabinoid receptors, in the nervous and cardiovascular systems.

CHROMOSOMAL LOCATION

Genetic locus: TRPV1 (human) mapping to 17p13.2; Trpv1 (mouse) mapping to 11 B4.

SOURCE

VR1 (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of VR1 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-12503 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

VR1 (C-15) is recommended for detection of VR1 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).

Suitable for use as control antibody for VR1 siRNA (h): sc-36826, VR1 siRNA (m): sc-36827, VR1 siRNA (r): sc-108093, VR1 shRNA Plasmid (h): sc-36826-SH, VR1 shRNA Plasmid (m): sc-36827-SH, VR1 shRNA Plasmid (r): sc-108093-SH, VR1 shRNA (h) Lentiviral Particles: sc-36826-V, VR1 shRNA (m) Lentiviral Particles: sc-36827-V and VR1 shRNA (r) Lentiviral Particles: sc-108093-V.

Molecular Weight of VR1: 100 kDa.

Positive Controls: F9 cell lysate: sc-2245, THP-1 cell lysate: sc-2238 or NIH/3T3 whole cell lysate: sc-2210.

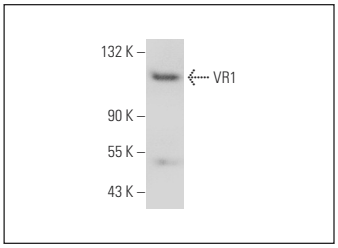
STORAGE

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.

DATA



VR1 (C-15): sc-12503. Western blot analysis of VR1 expression in F9 whole cell lysate.

SELECT PRODUCT CITATIONS

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4. Kechagias, S., et al. 2005. Expression of vanilloid receptor-1 in epithelial cells of human antral gastric mucosa. Scand. J. Gastroenterol. 40: 775-782.
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7. Lyall, V., et al. 2009. Regulation of the benzamil-insensitive salt taste receptor by intracellular Ca^{2+}, protein kinase C, and calcineurin. J. Neurophysiol. 102: 1591-1605.
8. Amantini, C., et al. 2009. Triggering of transient receptor potential vanilloid type 1 (TRPV1) by capsaicin induces Fas/CD95-mediated apoptosis of urothelial cancer cells in an ATM-dependent manner. Carcinogenesis 30: 1320-1329.
9. Coleman, J., et al. 2011. Strain differences in the neural, behavioral, and molecular correlates of sweet and salty taste in naive, ethanol- and sucrose-exposed P and NP rats. J. Neurophysiol. 106: 2606-2621.