

VR1 (P-19): sc-12498

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 (P-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of VR1 of rat origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-12498 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

VR1 (P-19) 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 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 VR1 siRNA (h): sc-36826, VR1 siRNA (m): sc-36827, VR1 shRNA Plasmid (h): sc-36826-SH, VR1 shRNA Plasmid (m): sc-36827-SH, VR1 shRNA (h) Lentiviral Particles: sc-36826-V and VR1 shRNA (m) Lentiviral Particles: sc-36827-V.

Molecular Weight of VR1: 100 kDa.

Positive Controls: VR1 (m2): 293 Lysate: sc-179742, THP-1 cell lysate: sc-2238 or A-10 cell lysate: sc-3806.

STORAGE

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

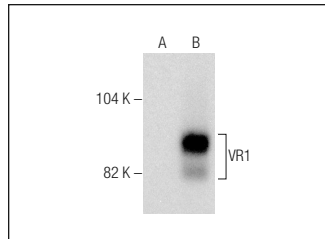
PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

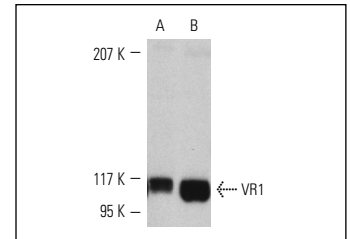
RESEARCH USE

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

DATA



VR1 (P-19): sc-12498. Western blot analysis of VR1 expression in non-transfected: sc-110760 (A) and mouse VR1 transfected: sc-179742 (B) 293 whole cell lysates.



VR1 (P-19): sc-12498. Western blot analysis of VR1 expression in untreated (A) and heat shock-treated (B) NIH/3T3 whole cell lysates.

SELECT PRODUCT CITATIONS

- Bodo, E., et al. 2004. Vanilloid receptor-1 (VR1) is widely expressed on various epithelial and mesenchymal cell types of human skin. *J. Invest. Dermatol.* 123: 410-413.
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- Yeo, E.J., et al. 2010. Ultrastructural analysis of the synaptic connectivity of TRPV1-expressing primary afferent terminals in the rat trigeminal caudal nucleus. *J. Comp. Neurol.* 518: 4134-4146.
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- Wu, Y.W., et al. 2010. 17- β -estradiol enhanced allodynia of inflammatory temporomandibular joint through upregulation of hippocampal TRPV1 in ovariectomized rats. *J. Neurosci.* 30: 8710-8719.
- Zhang, W., et al. 2011. Proteinase-activated receptor 2 mediates thermal hyperalgesia and is upregulated in a rat model of chronic pancreatitis. *Pancreas* 40: 300-307.
- Fonseca, B.M., et al. 2012. Characterisation of the endocannabinoid system in rat haemochorial placenta. *Reprod. Toxicol.* 34: 347-356.
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