**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 Ca2+ 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.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: Trpv1 (mouse) mapping to 11 B4.

**SOURCE**

VR1 (E-8) is a mouse monoclonal antibody raised against amino acids 1-130 mapping at the N-terminus of VR1 of rat origin.

**PRODUCT**

Each vial contains 200 µg IgG2a in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

VR1 (E-8) is available conjugated to agarose (sc-398417 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398417 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; and to either phycoerythrin (sc-398417 PE), fluorescein (sc-398417 FITC), Alexa Fluor® 488 (sc-398417 AF488) or Alexa Fluor® 647 (sc-398417 AF647), 200 µg/ml, for IF, IHC(P) and FCM.

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**APPLICATIONS**

VR1 (E-8) is recommended for detection of VR1 of mouse and rat origin by Western Blotting (starting dilution 1:100, 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 1:30-1:300).

Suitable for use as control antibody for VR1 siRNA (m): sc-368227, VR1 siRNA (r): sc-108093, VR1 shRNA Plasmid (m): sc-39827-SH, VR1 shRNA Plasmid (r): sc-108093-SH, VR1 shRNA (m) Lentiviral Particles: sc-39827-V and VR1 shRNA (r) Lentiviral Particles: sc-108093-V.

Molecular Weight of VR1: 100 kDa.

Positive Controls: VR1 (m2): 293 Lysate: sc-179742.

**RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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-2033 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilation range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

**DATA**

**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.

**PROTOCOLS**

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