

## VRL-1 (G-20): sc-22521

### 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 osmoregulatory 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.

### CHROMOSOMAL LOCATION

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

### SOURCE

VRL-1 (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of VRL-1 of human origin.

### PRODUCT

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

Blocking peptide available for competition studies, sc-22521 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### STORAGE

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

### APPLICATIONS

VRL-1 (G-20) 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  $\mu$ g per 100-500  $\mu$ 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.

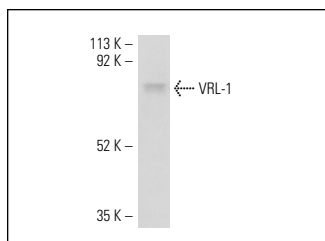
Molecular Weight of VRL-1: 86 kDa.

Positive Controls: mouse cerebellum extract: sc-2403.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

### DATA



VRL-1 (G-20): sc-22521. Western blot analysis of VRL-1 expression in mouse cerebellum tissue extract.

### SELECT PRODUCT CITATIONS

1. Caprodossi, S., et al. 2008. Transient receptor potential vanilloid type 2 (TRPV2) expression in normal urothelium and in urothelial carcinoma of human bladder: correlation with the pathologic stage. *Eur. Urol.* 54: 612-620.
2. Nabissi, M., et al. 2010. TRPV2 channel negatively controls glioma cell proliferation and resistance to Fas-induced apoptosis in ERK-dependent manner. *Carcinogenesis* 31: 794-803.

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **VRL-1 (G-4): sc-390439** or **VRL-1 (B-9): sc-514848**, our highly recommended monoclonal alternatives to VRL-1 (G-20).