



## V2R (S-18): sc-17933

### BACKGROUND

In vertebrates, volatile odorants are detected by sensory neurons of the main olfactory epithelium (MOE), which perceive smell. In addition to the MOE, many vertebrates possess a vomeronasal organ (VNO), which detects pheromones. Pheromones elicit specific behavioral and physiological responses, including mating and dominance status, among recipients of the same species. A family of receptors that detect pheromones are designated the vomeronasal organ receptors or commonly known as the pheromone receptors. They include three subfamilies, V1R, V2R and V3R, each of which are comprised of potentially 100 or more family members, including several nonfunctional pseudogenes. These receptors have thus far been characterized in mouse and rat, but functional vomeronasal receptors have yet to be identified in human. The vomeronasal receptors encode seven transmembrane, G-protein coupled receptors that activate Gi and Go and are expressed in a subset of neurons of the vomeronasal organ.

### REFERENCES

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2. Pantages, E. and Dulac, C. 2000. A novel family of candidate pheromone receptors in mammals. *Neuron* 28: 835-845.
3. Rodriguez, I., Greer, C.A., Mok, M.Y., and Mombaerts, P. 2000. A putative pheromone receptor gene expressed in human olfactory mucosa. *Nat. Genet.* 26: 18-19.
4. Giorgi, D., Friedman, C., Trask, B.J., and Rouquier, S. 2000. Characterization of nonfunctional V1R-like pheromone receptor sequences in human. *Genome Res.* 10: 1979-1985.
5. Del Punta, K., Rothman, A., Rodriguez, I., and Mombaerts, P. 2000. Sequence diversity and genomic organization of vomeronasal receptor genes in the mouse. *Genome Res.* 10: 1958-1967.
6. Hagino-Yamagishi, K., Matsuoka, M., Ichikawa, M., Wakabayashi, Y., Mori, Y., and Yazaki, K. 2001. The mouse putative pheromone receptor was specifically activated by stimulation with male mouse urine. *J. Biochem. (Tokyo)* 129: 509-512.
7. Brennan, P.A. 2001. The vomeronasal system. *Cell Mol. Life Sci.* 58: 546-555.
8. Martini, S., Silvotti, L., Shirazi, A., Ryba, N.J., and Tirindelli, R. 2001. Co-expression of putative pheromone receptors in the sensory neurons of the vomeronasal organ. *J. Neurosci.* 21: 843-848.

### SOURCE

V2R (S-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of V2R of mouse origin.

### STORAGE

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

### 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-17933 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

V2R (S-18) is recommended for detection of a broad range of V2R family members of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

### 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) 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.

### SELECT PRODUCT CITATIONS

1. Chu, J. Y. S., et al. 2007. Phenotypes developed in secretin receptor-null mice indicated a role for secretin in regulating renal water reabsorption. *Mol. Cell. Biol.* 27: 2499-2511.

### 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.