



## SR-3B (Q-13): sc-51196

### BACKGROUND

Serotonin is a molecule that functions as a neurotransmitter, a hormone and a mitogen, and it modulates several processes including psychiatric disorders, cardiovascular function and motility of the gastrointestinal tract. Serotonin receptors (also designated 5-hydroxytryptamine or 5-HT receptors) are members of the G protein-coupled receptor family that mediate the effects of serotonin. The serotonin receptors (alternatively designated SR) include SR-1, SR-2, SR-3, SR-4, SR-5, SR-6 and SR-7. The SR-1 receptors are subdivided into SR-1A, B, C, D, E and F receptors, while the SR-2 receptors comprise three subtypes: SR-2A, B and C. SR-3 is divided into SR-3A and SR-3B, a 441 amino acid protein with 41% sequence homology to SR-3A. SR-3B is responsible for fast, depolarizing responses in neurons after activation. The SR-3B protein is expressed in kidney and brain, specifically in hippocampus, thalamus and caudate nucleus, and particularly in amygdala. No expression of SR-3B is detected in heart, placenta, lung, liver, skeletal muscle or pancreas.

### REFERENCES

1. Davies, P.A., Pistis, M., Hanna, M.C., Peters, J.A., Lambert, J.J., Hales, T.G. and Kirkness, E.F. 1999. The 5-HT<sub>3B</sub> subunit is a major determinant of serotonin-receptor function. *Nature* 397: 359-363.
2. Dubin, A.E., Huvar, R., D'Andrea, M.R., Pyati, J., Zhu, J.Y., Joy, K.C., Wilson, S.J., Galindo, J.E., Glass, C.A., Luo, L., Jackson, M.R., Lovenberg, T.W. and Erlander, M.G. 1999. The pharmacological and functional characteristics of the serotonin 5-HT<sub>3A</sub> receptor are specifically modified by a 5-HT<sub>3B</sub> receptor subunit. *J. Biol. Chem.* 274: 30799-30810.
3. Mott, D.D., Erreger, K., Banke, T.G. and Traynelis, S.F. 2001. Open probability of homomeric murine 5-HT<sub>3A</sub> serotonin receptors depends on subunit occupancy. *J. Physiol.* 535 (Pt 2): 427-443.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604654. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Kelley, S.P., Dunlop, J.I., Kirkness, E.F., Lambert, J.J. and Peters, J.A. 2003. A cytoplasmic region determines single-channel conductance in 5-HT<sub>3</sub> receptors. *Nature* 424: 321-324.
6. Melke, J., Westberg, L., Nilsson, S., Landen, M., Soderstrom, H., Baghaei, F., Rosmond, R., Holm, G., Björntorp, P., Nilsson, L.G., Adolffson, R. and Eriksson, E. 2003. A polymorphism in the serotonin receptor 3A (HTR3A) gene and its association with harm avoidance in women. *Arch. Gen. Psychiatry* 60: 1017-1023.

### CHROMOSOMAL LOCATION

Genetic locus: HTR3B (human) mapping to 11q23.1; Htr3b (mouse) mapping to 9 B.

### SOURCE

SR-3B (Q-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SR-3B of human origin.

### RESEARCH USE

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

### 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-51196 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

SR-3B (Q-13) is recommended for detection of serotonin 3B receptor of human 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).

Suitable for use as control antibody for SR-3B siRNA (h): sc-61612.

Molecular Weight of SR-3B: 50.3 kDa.

### 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.

### 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](http://www.scbt.com) or our catalog for detailed protocols and support products.