

HTR3C (T-14): sc-102601

BACKGROUND

Serotonin is a monoamine neurotransmitter that is made in serotonergic neurons in the CNS (central nervous system) and is important in the regulation of mood, sleep, vomiting, sexuality and appetite. HTR3C (5-hydroxytryptamine receptor 3, family member C) is a subunit of the SR (serotonin receptor). HTR3C is also known as 5-HT3C or SR 3C and is a 447 amino acid protein that is expressed in a variety of tissues, including adult brain, colon, intestine, lung, muscle and stomach, as well as fetal colon and kidney. HTR3C is localized to the cellular membrane as a multi-pass membrane protein with four transmembrane spanning domains and is a member of the ligand-gated ionic channel family. HTR3C forms a pentaheteromeric complex with HTR3A, the result of which is a ligand-gated ionic channel that is a SR specific for cations and, when activated, causes fast depolarization in neurons. Due to its expression in colon and intestine, HTR3C may be involved in Serotonin functions within the gut, possibly functioning as a target for treatment of irritable bowel syndrome (IBS). HTR3C is also thought to play a role in anti-emetic efficacy and may not be functional in patients who exhibit chemotherapy-induced nausea and vomiting. Two nonsynonymous single nucleotide polymorphisms of the gene encoding HTR3C are thought to be associated with autistic disorder.

REFERENCES

- Niesler, B., et al. 2003. Cloning, physical mapping and expression analysis of the human 5-HT3 serotonin receptor-like genes HTR3C, HTR3D and HTR3E. *Gene* 310: 101-111.
- Karnovsky, A.M., et al. 2003. A cluster of novel serotonin receptor 3-like genes on human chromosome 3. *Gene* 319: 137-148.
- Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610121. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Niesler, B., et al. 2007. Characterization of the novel human serotonin receptor subunits 5-HT3C, 5-HT3D, and 5-HT3E. *Mol. Pharmacol.* 72: 8-17.
- Fasching, P.A., et al. 2008. Polymorphisms in the novel serotonin receptor subunit gene HTR3C show different risks for acute chemotherapy-induced vomiting after anthracycline chemotherapy. *J. Cancer Res. Clin. Oncol.* 134: 1079-1086.

CHROMOSOMAL LOCATION

Genetic locus: HTR3C (human) mapping to 3q27.1.

SOURCE

HTR3C (T-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of HTR3C of human origin.

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-102601 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

HTR3C (T-14) is recommended for detection of HTR3C of human origin by Western Blotting (starting dilution 1:200, 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 1:30-1:3000).

HTR3C (T-14) is also recommended for detection of HTR3C in additional species, including canine.

Suitable for use as control antibody for HTR3C siRNA (h): sc-78193, HTR3C shRNA Plasmid (h): sc-78193-SH and HTR3C shRNA (h) Lentiviral Particles: sc-78193-V.

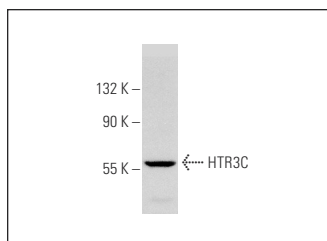
Molecular Weight of HTR3C: 50 kDa.

Positive Controls: HEK293 whole cell lysate: sc-45136 or human stomach extract: sc-363780.

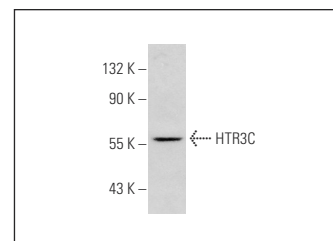
RECOMMENDED SECONDARY REAGENTS

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



HTR3C (T-14): sc-102601. Western blot analysis of HTR3C expression in HEK293 whole cell lysate.



HTR3C (T-14): sc-102601. Western blot analysis of HTR3C expression in human stomach tissue extract.

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.