SANTA CRUZ BIOTECHNOLOGY, INC.

HTR3D (G-5): sc-515279

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. 5-HT3 (5-hydroxytryptamine-3) receptor is the only ligand-gated ion channel within the family of serotonin receptors. It is composed of five subunits consisting of SR-3A, SR-3B, HTR3C, HTR3D and HTR3E. HTR3D (5-hydroxytryptamine receptor 3D), also known as Serotonin receptor 3D, is a 454 amino acid multi-pass membrane protein that is one components of the pentaheteromeric complex that forms the 5-HT3 receptor. HTR3D must be co-expressed with SR-3A to form a functional 5-HT3 receptor complex on the plasma membrane. Until it is complexed with SR-3A, HTR3D is localized within the endoplasmic reticulum. Expression of HTR3D is restricted to kidney, colon and liver. There are three different isoforms of HTR3D that are expressed as a result of alternative splicing events.

REFERENCES

1. 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.
2. Peters, J.A., et al. 2004. The 5-hydroxytryptamine type 3 (5-HT3) receptor reveals a novel determinant of single-channel conductance. Biochem. Soc. Trans. 32: 547-552.
3. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610122. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. 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.
5. Niesler, B., et al. 2008. Serotonin type 3 receptor genes: HTR3A, B, C, D, E. Pharmacogenomics 9: 501-504.
6. Barnes, N.M., et al. 2009. The 5-HT3 receptor—the relationship between structure and function. Neuropharmacology 56: 273-284.
7. Schuhmacher, A., et al. 2009. Influence of 5-HT3 receptor subunit genes HTR3A, HTR3B, HTR3C, HTR3D and HTR3E on treatment response to antipsychotics in schizophrenia. Pharmacogenet. Genomics 19: 843-851.

CHROMOSOMAL LOCATION

Genetic locus: HTR3D/HTR3E (human) mapping to 3q27.1.

SOURCE

HTR3D (G-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 378-396 within a cytoplasmic domain of HTR3D of human 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_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HTR3D (G-5) is available conjugated to agarose (sc-515279 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515279 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515279 PE), fluorescein (sc-515279 FITC), Alexa Fluor® 488 (sc-515279 AF488), Alexa Fluor® 546 (sc-515279 AF546), Alexa Fluor® 594 (sc-515279 AF594) or Alexa Fluor® 647 (sc-515279 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515279 AF680) or Alexa Fluor® 790 (sc-515279 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515279 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

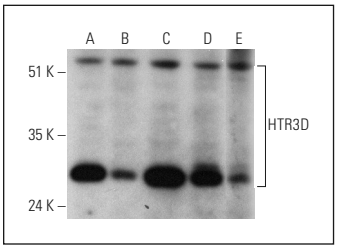
HTR3D (G-5) is recommended for detection of HTR3D and HTR3E of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of HTR3D: 50 kDa.

Molecular Weight of HTR3E: 51 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, SW480 cell lysate: sc-2219 or Hep G2 cell lysate: sc-2227.

DATA



HTR3D (G-5): sc-515279. Western blot analysis of HTR3D expression in CCRF-CEM (**A**), SW480 (**B**), HEK293T (**C**), Hep G2 (**D**) and NCI-H226 (**E**) whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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