

SYNDIG1 (Y-16): sc-85416

BACKGROUND

Synapse differentiation-inducing gene protein 1 (SYNDIG1), also known as DSPC2, IFITMD5, TMEM90B or C20orf39, is a 258 single-pass type II membrane protein that belongs to the CD225/Dispanin family. SYNDIG1 may regulate the content of the AMPA receptor at new synapses and contribute to postsynaptic development and maturation. As a homodimer, SYNDIG1 interacts with GRIA1 and GRIA2. The gene encoding TMEM90B maps to human chromosome 20. Comprising approximately 2% of the human genome, chromosome 20 contains nearly 63 million bases that encode over 600 genes, some of which are associated with Creutzfeldt-Jakob disease, amyotrophic lateral sclerosis, spinal muscular atrophy, ring chromosome 20 epilepsy syndrome and Alagille syndrome. Additionally, chromosome 20 contains a region with numerous genes which are thought to be important for seminal production and may be potential targets for male contraception.

REFERENCES

- Ville, D., et al. 2006. Early pattern of epilepsy in the ring chromosome 20 syndrome. *Epilepsia* 47: 543-549.
- Joó, J.G., et al. 2006. Trisomy 20 mosaicism and nonmosaic trisomy 20: a report of 2 cases. *J. Reprod. Med.* 51: 209-212.
- Fulbright, R.K., et al. 2006. The imaging appearance of Creutzfeldt-Jakob disease caused by the E200K mutation. *Magn. Reson. Imaging* 24: 1121-1129.
- Lundwall, A. 2007. A locus on chromosome 20 encompassing genes that are highly expressed in the epididymis. *Asian J. Androl.* 9: 540-544.
- Robert, M.L., et al. 2007. Alagille syndrome with deletion 20p12.2-p12.3 and hypoplastic left heart. *Clin. Dysmorphol.* 16: 241-246.
- Elghezal, H., et al. 2007. Ring chromosome 20 syndrome without deletions of the subtelomeric and CHRNA4--KCNQ2 genes loci. *Eur. J. Med. Genet.* 50: 441-445.
- O'Rand, M.G., et al. 2007. Eppin: an epididymal protease inhibitor and a target for male contraception. *Soc. Reprod. Fertil. Suppl.* 63: 445-453.
- Kalashnikova, E., et al. 2010. SynDIG1: an activity-regulated, AMPA-receptor-interacting transmembrane protein that regulates excitatory synapse development. *Neuron* 65: 80-93.

CHROMOSOMAL LOCATION

Genetic locus: SYNDIG1 (human) mapping to 20p11.21; Syndig1 (mouse) mapping to 2 G3.

SOURCE

SYNDIG1 (Y-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of SYNDIG1 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 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-85416 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SYNDIG1 (Y-16) is recommended for detection of SYNDIG1 of mouse, rat and 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).

SYNDIG1 (Y-16) is also recommended for detection of SYNDIG1 in additional species, including equine and canine.

Suitable for use as control antibody for SYNDIG1 siRNA (h): sc-72734, SYNDIG1 siRNA (m): sc-151745, SYNDIG1 shRNA Plasmid (h): sc-72734-SH, SYNDIG1 shRNA Plasmid (m): sc-151745-SH, SYNDIG1 shRNA (h) Lentiviral Particles: sc-72734-V and SYNDIG1 shRNA (m) Lentiviral Particles: sc-151745-V.

Molecular Weight of SYNDIG1: 29 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.