

E-Syt3 (P-19): sc-102511

BACKGROUND

Synaptotagmins are a large gene family that function as regulators of both exocytosis and endocytosis and are involved in neurotransmitter secretion from small secretory vesicles. E-Syt1, E-Syt2 and E-Syt3 are Ca²⁺-regulated intrinsic membrane proteins that belong to the Extended Synaptotagmins (E-Syts) family. Primary structures and biochemical properties of the E-Syts family are highly conserved from yeast to human and consist of multiple C2 domains, which mediate lipid and calcium binding. Ubiquitously expressed with highest expression in brain, members of the E-Syts family form heteromeric complexes and are thought to play a role in the formation of junctions between endoplasmic reticulum and plasma membrane. E-Syt3 (extended synaptotagmin-like protein 3), also known as FAM62C or CHR3SYT, is a 886 amino acid protein that exists as two alternatively spliced isoforms. The gene encoding E-Syt3 is located on human chromosome 3q22.3.

REFERENCES

- Müller, S., Stanyon, R., Finelli, P., Archidiacono, N. and Wienberg, J. 2000. Molecular cytogenetic dissection of human chromosomes 3 and 21 evolution. *Proc. Natl. Acad. Sci. USA* 97: 206-211.
- Braga, E.A., Kashuba, V.I., Maliukova, A.V., Loginov, V.I., Senchenko, V.N., Bazov, I.V., Kiselev, L.L. and Zabarovskii, E.R. 2003. New tumor suppressor genes in hot spots of human chromosome 3: new methods of identification. *Mol. Biol.* 37: 194-211.
- Tsend-Ayush, E., Grütznert, F., Yue, Y., Grossmann, B., Hänsel, U., Sudbrak, R. and Haaf, T. 2004. Plasticity of human chromosome 3 during primate evolution. *Genomics* 83: 193-202.
- Yue, Y., Grossmann, B., Ferguson-Smith, M., Yang, F. and Haaf, T. 2005. Comparative cytogenetics of human chromosome 3q21.3 reveals a hot spot for ectopic recombination in hominoid evolution. *Genomics* 85: 36-47.
- Darai, E., Kost-Alimova, M., Kiss, H., Kansoul, H., Klein, G. and Imreh, S. 2005. Evolutionarily plastic regions at human 3p21.3 coincide with tumor breakpoints identified by the "elimination test". *Genomics* 86: 1-12.
- Yue, Y., Grossmann, B., Tsend-Ayush, E., Grütznert, F., Ferguson-Smith, M.A., Yang, F. and Haaf, T. 2005. Genomic structure and paralogous regions of the inversion breakpoint occurring between human chromosome 3p12.3 and orangutan chromosome 2. *Cytogenet. Genome Res.* 108: 98-105.
- Muzny, D.M., Scherer, S.E., Kaul, R., Wang, J., Yu, J., Sudbrak, R., Buhay, C.J., Chen, R., Cree, A., Ding, Y., Dugan-Rocha, S., Gill, R., Gunaratne, P., Harris, R.A., Hawes, A.C., Hernandez, J., Hodgson, A.V., et al. 2006. The DNA sequence, annotation and analysis of human chromosome 3. *Nature* 440: 1194-1198.
- Nareyck, G., Zeschknig, M., Prescher, G., Lohmann, D.R. and Anastassiou, G. 2006. Establishment and characterization of two uveal melanoma cell lines derived from tumors with loss of one chromosome 3. *Exp. Eye Res.* 83: 858-864.

CHROMOSOMAL LOCATION

Genetic locus: ESYT3 (human) mapping to 3q22.3.

SOURCE

E-Syt3 (P-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of E-Syt3 of human origin.

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-102511 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

E-Syt3 (P-19) is recommended for detection of E-Syt3 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).

E-Syt3 (P-19) is also recommended for detection of E-Syt3 in additional species, including equine.

Suitable for use as control antibody for E-Syt3 siRNA (h): sc-78406, E-Syt3 shRNA Plasmid (h): sc-78406-SH and E-Syt3 shRNA (h) Lentiviral Particles: sc-78406-V.

Molecular Weight of E-Syt3 isoform 1/2: 100/58 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.

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.