Teneurin-2 (N-13): sc-165674



The Power to Question

BACKGROUND

Teneurins represent a highly conserved family of four type II transmembrane proteins in vertebrates. They exist as homodimers and participate in homophilic interactions. Teneurin-2, also known as ODZ2 (odz, odd Oz/ten-m homolog 2), TNM2 (tenascin-M2) or TEN-M2, is a 2,774 single-pass type II membrane protein that is highly expressed in heart, brain, liver and kidney, and weakly expressed in lung and testis. Belonging to the tenascin family and the Teneurin subfamily, Teneurin-2 is thought to function as a cellular signal transducer. Existing as a homodimer, Teneurin-2 contains eight EGF-like domains, five NHL repeats, a teneurin N-terminal domain and 23 YD repeats. The cytoplasmic proline-rich regions of Teneurin-2 may serve as docking domains for intracellular SH3-containing proteins. Teneurin-2 is encoded by the ODZ2 gene, which is located on human chromosome 5q34.

REFERENCES

- Hirosawa, M., Nagase, T., Ishikawa, K., Kikuno, R., Nomura, N. and Ohara, O. 1999. Characterization of cDNA clones selected by the GeneMark analysis from size-fractionated cDNA libraries from human brain. DNA Res. 6: 329-336.
- Ben-Zur, T. and Wides, R. 1999. Mapping homologs of Drosophila odd Oz (odz): Doc4/Odz4 to mouse chromosome 7, Odz1 to mouse chromosome 11; and ODZ3 to human chromosome Xq25. Genomics 58: 102-103.
- Oohashi, T., Zhou, X.H., Feng, K., Richter, B., Mörgelin, M., Perez, M.T., Su, W.D., Chiquet-Ehrismann, R., Rauch, U. and Fässler, R. 1999. Mouse ten-m/Odz is a new family of dimeric type II transmembrane proteins expressed in many tissues. J. Cell Biol. 145: 563-577.
- 4. Ben-Zur, T., Feige, E., Motro, B. and Wides, R. 2000. The mammalian Odz gene family: homologs of a *Drosophila* pair-rule gene with expression implying distinct yet overlapping developmental roles. Dev. Biol. 217: 107-120.
- 5. Tucker, R.P., Chiquet-Ehrismann, R., Chevron, M.P., Martin, D., Hall, R.J. and Rubin, B.P. 2001. Teneurin-2 is expressed in tissues that regulate limb and somite pattern formation and is induced *in vitro* and *in situ* by FGF8. Dev. Dyn. 220: 27-39.
- Rubin, B.P., Tucker, R.P., Brown-Luedi, M., Martin, D. and Chiquet-Ehrismann, R. 2002. Teneurin 2 is expressed by the neurons of the thalamofugal visual system *in situ* and promotes homophilic cell-cell adhesion *in vitro*. Development 129: 4697-4705.
- 7. Zhou, X.H., Brandau, O., Feng, K., Oohashi, T., Ninomiya, Y., Rauch, U. and Fässler, R. 2003. The murine Ten-m/Odz genes show distinct but overlapping expression patterns during development and in adult brain. Gene Expr. Patterns 3: 397-405.
- 8. Vinatzer, U., Gollinger, M., Müllauer, L., Raderer, M., Chott, A. and Streubel, B. 2008. Mucosa-associated lymphoid tissue lymphoma: novel translocations including rearrangements of ODZ2, JMJD2C, and CNN3. Clin. Cancer Res. 14: 6426-6431.

RESEARCH USE

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

CHROMOSOMAL LOCATION

Genetic locus: TENM2 (human) mapping to 5q34; Tenm2 (mouse) mapping to 11 A4.

SOURCE

Teneurin-2 (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal cytoplasmic domain of Teneurin-2 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-165674 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Teneurin-2 (N-13) is recommended for detection of Teneurin-2 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); non cross-reactive with Teneurin-1 or Teneurin-3.

Teneurin-2 (N-13) is also recommended for detection of Teneurin-2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Teneurin-2 siRNA (h): sc-92017, Teneurin-2 siRNA (m): sc-154190, Teneurin-2 shRNA Plasmid (h): sc-92017-SH, Teneurin-2 shRNA Plasmid (m): sc-154190-SH, Teneurin-2 shRNA (h) Lentiviral Particles: sc-92017-V and Teneurin-2 shRNA (m) Lentiviral Particles: sc-154190-V.

Molecular Weight of Teneurin-2: 308 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 or our catalog for detailed protocols and support products.