SANTA CRUZ BIOTECHNOLOGY, INC.

NET-5 (D-14): sc-138471

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The tetraspanin family is a group of cell surface proteins that regulate cell development, activation, growth and motility. Each member contains four hydrophobic domains and participates in the mediation of signal transduction. NET-5, also known as TSPAN9 (tetraspanin 9), is a 239 amino acid multi-pass membrane protein that belongs to the tetraspanin (TM4SF) family. NET-5 forms a complex with GPVI in the tetraspanin microdomains on the platelet surface, and is encoded by a gene that maps to human chromosome 12p13.33. Chromosome 12 encodes over 1,100 genes and comprises approximately 4.5% of the human genome. Chromosome 12 is associated with a variety of diseases and afflictions, including hypochondrogenesis, achondrogenesis, Kniest dysplasia, Noonan syndrome and trisomy 12p, which causes facial developmental defects and seizure disorders.

REFERENCES

1. Allen, T.L., et al. 1996. Cytogenetic and molecular analysis in trisomy 12p. Am. J. Med. Genet. 63: 250-256.
2. Serru, V., et al. 2000. Sequence and expression of seven new tetraspans. Biochim. Biophys. Acta 1478: 159-163.
3. Delgado Carrasco, J., et al. 2001. Achondrogenesis type II-hypochondrogenesis: radiological features. Case report. An. Esp. Pediatr. 55: 553-557.
4. Yokoyama, T., et al. 2003. A case of Kniest dysplasia with retinal detachment and the mutation analysis. Am. J. Ophthalmol. 136: 1186-1188.
5. Forzano, F., et al. 2007. A familial case of achondrogenesis type II caused by a dominant COL2A1 mutation and "patchy" expression in the mosaic father. Am. J. Med. Genet. A 143A: 2815-2820.
6. Wainwright, H., et al. 2008. Visceral manifestations of hypochondrogenesis. Virchows Arch. 453: 203-207.
7. Protty, M.B., et al. 2009. Identification of Tspan9 as a novel platelet tetraspanin and the collagen receptor GPVI as a component of tetraspanin microdomains. Biochem. J. 417: 391-400.

CHROMOSOMAL LOCATION

Genetic locus: TSPAN9 (human) mapping to 12p13.33; Tspan9 (mouse) mapping to 6 F3.

SOURCE

NET-5 (D-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of NET-5 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-138471 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

NET-5 (D-14) is recommended for detection of NET-5 of mouse, rat and 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); non cross-reactive with other NET family members.

NET-5 (D-14) is also recommended for detection of NET-5 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for NET-5 siRNA (h): sc-95972, NET-5 siRNA (m): sc-149915, NET-5 shRNA Plasmid (h): sc-95972-SH, NET-5 shRNA Plasmid (m): sc-149915-SH, NET-5 shRNA (h) Lentiviral Particles: sc-95972-V and NET-5 shRNA (m) Lentiviral Particles: sc-149915-V.

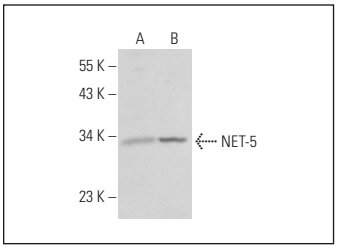
Molecular Weight of NET-5: 27 kDa.

Positive Controls: mouse platelet extract: sc-364248 or MEG-01 cell lysate: sc-2283.

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



NET-5 (D-14): sc-138471. Western blot analysis of NET-5 expression in mouse platelet extract (**A**) and MEG-01 whole cell lysate (**B**).

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.