SANTA CRUZ BIOTECHNOLOGY, INC.

NTE (K-19): sc-30587

BACKGROUND

neuropathy target esterase (NTE) is a member of a newly discovered protein family, with a domain conserved through evolution. It is an integral membrane protein present in all neurons and in some non-neural-cell types of vertebrates. NTE is important in neural development and has the capacity to hydrolyse esters. NTE is important in the cell-signalling pathway controlling interactions between neurons and accessory glial cells in nervous system development. NTE can be modified by organo-phosphates, which can cause neuropathy (characterized by axonal degeneration) in humans. NTE loss can lead to prominent neuronal pathology in the thalamus amd hippocampus and can also lead to defects in the cerebellum.

REFERENCES

1. http://harvester.embl.de/harvester/Q86W/Q86W58.htm
2. Tormo, N., et al. 1993. Soluble and particulate organophosphorus neuropathy target esterase in brain and sciatic nerve of the hen, cat, rat, and chick. J. Neurochem. 61:2164-8.
3. Glynn, P., 1999. Neuropathy target esterase. Biochem. J. 3: 625-31.
4. Quistad, G.B., et al. 2003. Evidence that mouse brain neuropathy target esterase is a lysophospholipase. Proc. Natl. Acad. Sci. USA. 100: 7983-7987.
5. Li, Y., et al. 2003. Protein domains, catalytic activity, and subcellular distribution of neuropathy target esterase in Mammalian cells. J. Biol. Chem. 278: 8820-8825.
6. Akassoglou, K., et al. 2004. Brain-specific deletion of neuropathy target esterase/swisscheese results in neurodegeneration. Proc. Natl. Acad. Sci. USA. 101: 5075-80.
7. Zaccheo, O., et al. 2004. Neuropathy target esterase and its yeast homologue degrade phosphatidylcholine to glycerophosphocholine in living cells. J. Biol. Chem. 279: 24024-24033.
8. Moser, M., et al. 2004. Placental failure and impaired vasculogenesis result in embryonic lethality for neuropathy target esterase-deficient mice. Mol. Cell Biol.24: 1667-1679.

SOURCE

NTE (K-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NTE 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-30587 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NTE (K-19) is recommended for detection of NTE of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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.

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.