

NTE (G-4): sc-271049

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. It is important in the cell-signalling pathway controlling interactions between neurons and accessory glial cells in nervous system development. NTE can be modified by organophosphates, which can cause neuropathy (characterized by axonal degeneration) in humans. NTE loss can lead to prominent neuronal pathology in the thalamus and hippocampus and can also lead to defects in the cerebellum.

REFERENCES

1. 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: 2164-2168.
2. Glynn, P. 1999. Neuropathy target esterase. *Biochem. J.* 344: 625-631.
3. Quistad, G.B., et al. 2003. Evidence that mouse brain neuropathy target esterase is a lysophospholipase. *Proc. Natl. Acad. Sci. USA* 100: 7983-7987.
4. 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.
5. 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.

CHROMOSOMAL LOCATION

Genetic locus: PNPLA6 (human) mapping to 19p13.2; Pnpla6 (mouse) mapping to 8 A1.1.

SOURCE

NTE (G-4) is a mouse monoclonal antibody raised against amino acids 291-490 mapping within an internal region of NTE of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NTE (G-4) is available conjugated to agarose (sc-271049 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271049 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271049 PE), fluorescein (sc-271049 FITC), Alexa Fluor[®] 488 (sc-271049 AF488), Alexa Fluor[®] 546 (sc-271049 AF546), Alexa Fluor[®] 594 (sc-271049 AF594) or Alexa Fluor[®] 647 (sc-271049 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-271049 AF680) or Alexa Fluor[®] 790 (sc-271049 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

NTE (G-4) is recommended for detection of NTE of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for NTE siRNA (h): sc-44513, NTE siRNA (m): sc-44514, NTE shRNA Plasmid (h): sc-44513-SH, NTE shRNA Plasmid (m): sc-44514-SH, NTE shRNA (h) Lentiviral Particles: sc-44513-V and NTE shRNA (m) Lentiviral Particles: sc-44514-V.

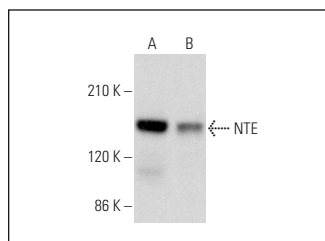
Molecular Weight of NTE: 155 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, COLO 205 whole cell lysate: sc-364177 or IMR-32 cell lysate: sc-2409.

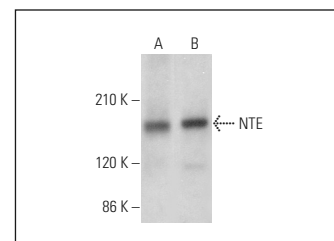
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



NTE (G-4): sc-271049. Western blot analysis of NTE expression in HeLa (A) and COLO 205 (B) whole cell lysates.



NTE (G-4): sc-271049. Western blot analysis of NTE expression in IMR-32 (A) and TK-1 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Soto-Acosta, R., et al. 2018. Fragile X mental retardation protein is a Zika virus restriction factor that is antagonized by subgenomic flaviviral RNA. *Elife* 7: e39023.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

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