

PNPLA7 (N-16): sc-243837

BACKGROUND

PNPLA7 (patatin-like phospholipase domain containing), also known as NTE1 or NTE-R1, is a 1,317 amino acid single-pass membrane protein that contains 3 cyclic nucleotide-binding domains, one patatin domain and belongs to the NTE family. Predominantly expressed in prostate, pancreas and adipose tissue, PNPLA7 shares approximately 60% sequence identity with PNPLA6 and exists as five alternatively spliced isoforms. PNPLA7 functions as a serine hydrolase, whose specific chemical modification by certain organophosphorus compounds results in distal axonopathy. PNPLA7, like other human patatin-like phospholipases, plays a role in regulating adipocyte differentiation. PNPLA7 is induced by metabolic stimuli and may be involved in energy metabolism. The gene that encodes PNPLA7 maps to human chromosome 9q34.3.

REFERENCES

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3. Saarela, J., et al. 2008. The patatin-like lipase family in *Gallus gallus*. *BMC Genomics* 9: 281.
4. Kienesberger, P.C., et al. 2008. Identification of an Insulin-regulated lysophospholipase with homology to neuropathy target esterase. *J. Biol. Chem.* 283: 5908-5917.
5. Vose, S.C., et al. 2008. Cellular function of neuropathy target esterase in lysophosphatidylcholine action. *Toxicol. Appl. Pharmacol.* 232: 376-383.
6. Yatsenko, S.A., et al. 2009. Molecular mechanisms for subtelomeric rearrangements associated with the 9q34.3 microdeletion syndrome. *Hum. Mol. Genet.* 18: 1924-1936.
7. Zechner, R., et al. 2009. Adipose triglyceride lipase and the lipolytic catabolism of cellular fat stores. *J. Lipid Res.* 50: 3-21.
8. Kienesberger, P.C., et al. 2009. Mammalian patatin domain containing proteins: a family with diverse lipolytic activities involved in multiple biological functions. *J. Lipid Res.* 50: S63-S68.
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CHROMOSOMAL LOCATION

Genetic locus: PNPLA7 (human) mapping to 9q34.3.

SOURCE

PNPLA7 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PNPLA7 of human origin.

STORAGE

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

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-243837 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PNPLA7 (N-16) is recommended for detection of PNPLA7 of 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).

Suitable for use as control antibody for PNPLA7 siRNA (h): sc-92809, PNPLA7 shRNA Plasmid (h): sc-92809-SH and PNPLA7 shRNA (h) Lentiviral Particles: sc-92809-V.

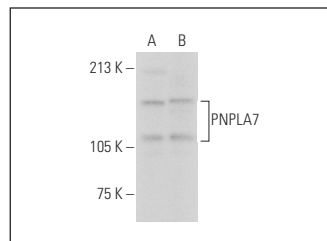
Molecular Weight of PNPLA7 isoforms: 146/51/139/140/148 kDa.

Positive Controls: COLO 205 whole cell lysate: sc-364177 or HeLa whole cell lysate: sc-2200.

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



PNPLA7 (N-16): sc-243837. Western blot analysis of PNPLA7 expression in COLO 205 (A) and HeLa (B) whole cell lysates.

RESEARCH USE

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