

PNPLA7 (Q-17): sc-243838

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

1. Wilson, P.A., et al. 2006. Characterization of the human patatin-like phospholipase family. *J. Lipid Res.* 47: 1940-1949.
2. Chang, P.A., et al. 2007. Molecular cloning and expression of the C-terminal domain of mouse NTE-related esterase. *Mol. Cell. Biochem.* 306: 25-32.
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.

CHROMOSOMAL LOCATION

Genetic locus: PNPLA7 (human) mapping to 9q34.3; Pnpla7 (mouse) mapping to 2 A3.

SOURCE

PNPLA7 (Q-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PNPLA7 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-243838 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PNPLA7 (Q-17) is recommended for detection of PNPLA7 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).

Suitable for use as control antibody for PNPLA7 siRNA (h): sc-92809, PNPLA7 siRNA (m): sc-152360, PNPLA7 shRNA Plasmid (h): sc-92809-SH, PNPLA7 shRNA Plasmid (m): sc-152360-SH, PNPLA7 shRNA (h) Lentiviral Particles: sc-92809-V and PNPLA7 shRNA (m) Lentiviral Particles: sc-152360-V.

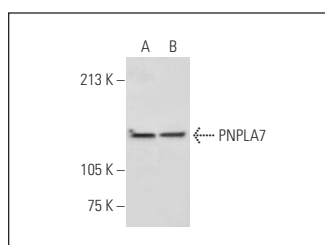
Molecular Weight of PNPLA7 isoforms 1/2/3/4/5: 146/51/139/140/148 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or COLO 205 whole cell lysate: sc-364177.

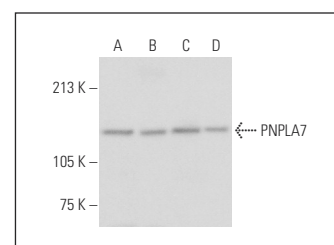
RECOMMENDED SECONDARY REAGENTS

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 (Q-17): sc-243838. Western blot analysis of PNPLA7 expression in Hep G2 (A) and NIH/3T3 (B) whole cell lysates.



PNPLA7 (Q-17): sc-243838. Western blot analysis of PNPLA7 expression in COLO 205 (A), HeLa (B), K-562 (C) and F9 (D) whole cell lysates.

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.