

GNPAT (G-18): sc-242920

BACKGROUND

GNPAT (glyceronephosphate O-acyltransferase), also known as DAP-AT (dihydroxyacetone phosphate acyltransferase) or acyl-CoA:dihydroxyacetonephosphate acyltransferase, is a 680 amino acid peroxisomal membrane protein that belongs to the GPAT/DAPAT family. GNPAT acts as a key member in ether phospholipid biosynthesis, and may also be a member of the heterotrimeric complex, which consists of GNPAT, AGPS and a modified form of GNPAT. The gene encoding GNPAT maps to human chromosome 1q42.2. Defects to this gene are associated with rhizomelic chondrodysplasia punctata, a disease characterized by rhizomelic shortening of femur and humerus, vertebral disorders, cataracts, cutaneous lesions and severe mental retardation. Single-nucleotide polymorphisms (SNPs) present on the gene encoding GNPAT may result in vulnerability to schizophrenia.

REFERENCES

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- Thai, T.P., et al. 2001. Impaired membrane traffic in defective ether lipid biosynthesis. *Hum. Mol. Genet.* 10: 127-136.
- Rodemer, C., et al. 2003. Inactivation of ether lipid biosynthesis causes male infertility, defects in eye development and optic nerve hypoplasia in mice. *Hum. Mol. Genet.* 12: 1881-1895.

STORAGE

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

CHROMOSOMAL LOCATION

Genetic locus: GNPAT (human) mapping to 1q42.2.

SOURCE

GNPAT (G-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GNPAT 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-242920 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GNPAT (G-18) is recommended for detection of GNPAT of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

GNPAT (G-18) is also recommended for detection of GNPAT in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for GNPAT siRNA (h): sc-88448, GNPAT shRNA Plasmid (h): sc-88448-SH and GNPAT shRNA (h) Lentiviral Particles: sc-88448-V.

Molecular Weight of GNPAT: 77 kDa.

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.

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.