

# ASPG (N-16): sc-245007

## BACKGROUND

ASPG (asparaginase homolog), also known as 60 kDa lysophospholipase, is a 567 amino acid phosphoprotein that contains 5 ANK repeats and belongs to the asparaginase 1 family. A monomer, ASPG is conserved in chimpanzee, bovine, mouse and rat. Highly expressed in liver and kidney, but minimally in lung and heart, ASPG exists as two alternatively spliced isoforms. ASPG participates in asparaginase, transacylase, platelet-activating factor acetylhydrolase, lysophospholipase and 1-alkyl-2-acetyl-glycerophosphocholine esterase activities. ASPG is encoded by a gene that maps to human chromosome 14q32.33. Chromosome 14 contains approximately 700 genes and 106 million base pairs, and makes up 3.5% of human cellular DNA. Chromosome 14 is linked to Alzheimer's disease,  $\alpha$ 1-antitrypsin deficiency and various B cell malignancies.

## REFERENCES

1. Sugimoto, H., et al. 1998. Cloning and expression of cDNA encoding rat liver 60-kDa lysophospholipase containing an asparaginase-like region and ankyrin repeat. *J. Biol. Chem.* 273: 12536-12542.
2. Baburina, I. et al. 1999. Cellular responses to excess phospholipid. *J. Biol. Chem.* 274: 9400-9408.
3. Heilig, R., et al. 2003. The DNA sequence and analysis of human chromosome 14. *Nature* 421: 601-607.
4. Stolk, J., et al. 2006.  $\alpha$ 1-antitrypsin deficiency: current perspective on research, diagnosis, and management. *Int. J. Chron. Obstruct. Pulmon. Dis.* 1: 151-160.
5. Filley, C.M., et al. 2007. The genetics of very early onset Alzheimer disease. *Cogn. Behav. Neurol.* 20: 149-156.
6. Martín-Subero, J.I., et al. 2007. A comprehensive genetic and histopathologic analysis identifies two subgroups of B-cell malignancies carrying a t(14;19)(q32;q13) or variant BCL3-translocation. *Leukemia* 21: 1532-1544.
7. Albani, D., et al. 2007. Presenilin-1 mutation E318G and familial Alzheimer's disease in the Italian population. *Neurobiol. Aging.* 28: 1682-1688.
8. Cruz, P.E., et al. 2007. The promise of gene therapy for the treatment of  $\alpha$ -1 antitrypsin deficiency. *Pharmacogenomics* 8: 1191-1198.

## CHROMOSOMAL LOCATION

Genetic locus: ASPG (human) mapping to 14q32.33; Aspg (mouse) mapping to 12 F1.

## SOURCE

ASPG (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ASPG 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  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-245007 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

ASPG (N-16) is recommended for detection of ASPG of mouse, rat and 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).

ASPG (N-16) is also recommended for detection of ASPG in additional species, including equine and bovine.

Suitable for use as control antibody for ASPG siRNA (h): sc-92274, ASPG siRNA (m): sc-140653, ASPG shRNA Plasmid (h): sc-92274-SH, ASPG shRNA Plasmid (m): sc-140653-SH, ASPG shRNA (h) Lentiviral Particles: sc-92274-V and ASPG shRNA (m) Lentiviral Particles: sc-140653-V.

Molecular Weight of ASPG isoforms 1/2: 60/63 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](http://www.scbt.com) or our catalog for detailed protocols and support products.