

# AGPS (I-14): sc-161319

## BACKGROUND

AGPS (alkyldihydroxyacetonephosphate synthase), also known as alkyglycerone-phosphate synthase and AAG5 (aging-associated gene 5 protein), is a 658 amino acid enzyme that is required for glycerolipid metabolism and ether lipid biosynthesis. Localized to the inner aspect of the peroxisomal membrane, AGPS is likely part of a heterotrimeric complex that is also composed of GNPAT and a modified form of GNPAT. Containing one FAD-binding PCMH-type domain, AGPS utilizes FAD as a cofactor in the synthesis of alkyglycerone 3-phosphate and a long-chain acid anion from 1-acteyl-glycerone 3-phosphate and a long-chain alcohol. Defects in the gene encoding AGPS results in rhizomelic chondrodysplasia punctata type 3, a disease characterized by vertebral disorders, severe mental retardation, cutaneous lesions, cataracts and rhizomelic shortening of the humerus and femur.

## REFERENCES

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- Biermann, J., et al. 1999. Alkyl-dihydroxyacetone phosphate synthase and dihydroxyacetone phosphate acyltransferase form a protein complex in peroxisomes. *Eur. J. Biochem.* 261: 492-499.
- de Vet, E.C. and van den Bosch, H. 2000. Alkyl-dihydroxyacetonephosphate synthase. *Cell Biochem. Biophys.* 32: 117-121.
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- Honsho, M., et al. 2008. Isolation and characterization of mutant animal cell line defective in alkyl-dihydroxyacetonephosphate synthase: localization and transport of plasmalogens to post-Golgi compartments. *Biochim. Biophys. Acta* 1783: 1857-1865.

## CHROMOSOMAL LOCATION

Genetic locus: AGPS (human) mapping to 2q31.2; Agps (mouse) mapping to 2 C3.

## SOURCE

AGPS (I-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of AGPS 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-161319 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

AGPS (I-14) is recommended for detection of AGPS 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).

AGPS (I-14) is also recommended for detection of AGPS in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for AGPS siRNA (h): sc-94310, AGPS siRNA (m): sc-140906, AGPS shRNA Plasmid (h): sc-94310-SH, AGPS shRNA Plasmid (m): sc-140906-SH, AGPS shRNA (h) Lentiviral Particles: sc-94310-V and AGPS shRNA (m) Lentiviral Particles: sc-140906-V.

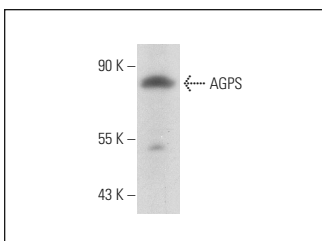
Molecular Weight of AGPS: 78-79 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

## 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



AGPS (I-14): sc-161319. Western blot analysis of AGPS expression in K-562 whole cell lysate.

## 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.