

PBGS (N-17): sc-50777

BACKGROUND

PBGS (porphobilinogen synthase), an enzyme that belongs to the ALADH family, is composed of eight identical subunits and catalyzes the condensation of two molecules of δ -aminolevulinic acid to form porphobilinogen, a precursor of heme, cytochromes and other hemoproteins. It also catalyzes the second step in the porphyrin and heme biosynthetic pathway in which zinc is essential for enzymatic activity. PBGS is inhibited by lead. A defect in the gene encoding PBGS, ALAD, can cause increased sensitivity to lead poisoning and acute hepatic porphyria, a group of inherited disorders caused by partial enzyme defects in heme biosynthesis, which includes acute intermittent porphyria, variegate porphyria and hereditary coproporphyria. There are two common alleles of ALAD, ALAD*2 and ALAD*1. When exposed to environmental lead, individuals heterozygous or homozygous for ALAD*2 Asn 59 have significantly higher blood lead levels than do ALAD*1 Lys 59 homozygotes.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: ALAD (human) mapping to 9q32; Alad (mouse) mapping to 4 B3.

SOURCE

PBGS (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PBGS of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-50777 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PBGS (N-17) is recommended for detection of PBGS 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).

PBGS (N-17) is also recommended for detection of PBGS in additional species, including equine, canine and bovine.

Suitable for use as control antibody for PBGS siRNA (h): sc-61385, PBGS siRNA (m): sc-61386, PBGS shRNA Plasmid (h): sc-61385-SH, PBGS shRNA Plasmid (m): sc-61386-SH, PBGS shRNA (h) Lentiviral Particles: sc-61385-V and PBGS shRNA (m) Lentiviral Particles: sc-61386-V.

Molecular Weight of PBGS: 37-39 kDa.

Positive Controls: HEL 92.1.7 cell lysate: sc-2270, TF-1 cell lysate: sc-2412 or Hep G2 cell lysate: sc-2227.

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.

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.