SANTA CRUZ BIOTECHNOLOGY, INC.

AGXT2L2 (I-14): sc-163664

BACKGROUND

Members of the class-III pyridoxal-phosphate-dependent aminotransferase family, such as AGXT2, catalyze the conversion of glyoxylate to glycine using L-alanine as the amino donor. AGXT2 protects from asymmetric dimethylarginine (ADMA)-induced inhibition in nitric oxide (NO) production. Elevated blood concentrations of ADMA, a methyl derivate of the amino acid arginine and an endogenous inhibitor of nitric oxide (NO) synthase, is produced by the physiological degradation of methylated proteins and is found in association with diabetes, hypertension, congestive heart failure and atherosclerosis. AGXT2L2 (alanine-glyoxylate aminotransferase 2-like 2) is a 450 amino acid pyridoxal phosphate that exists as a homotetramer. Belonging to the class-III pyridoxal-phosphate-dependent aminotransferase family, AGXT2L2 localizes to the mitochondria and exists as three alternatively spliced isoforms. Encoded by a gene located on human chromosome 5q35.3, AGXT2L2 may have similar functions as AGXT2.

REFERENCES

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4. Liepman, A.H., et al. 2001. Peroxisomal alanine: glyoxylate aminotransferase (AGT1) is a photorespiratory enzyme with multiple substrates in *Arabidopsis thaliana*. Plant J. 25: 487-498.
5. Liepman, A.H., et al. 2003. Alanine aminotransferase homologs catalyze the glutamate:glyoxylate aminotransferase reaction in peroxisomes of *Arabidopsis*. Plant Physiol. 131: 215-227.
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8. Rodionov, R.N., et al. 2009. Human alanine-glyoxylate aminotransferase 2 lowers ADMA and protects from ADMA-induced inhibition of nitric oxide production. J. Biol. Chem. 285: 5385-5391.
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CHROMOSOMAL LOCATION

Genetic locus: AGXT2L2 (human) mapping to 5q35.3; Agxt2l2 (mouse) mapping to 11 B1.3.

SOURCE

AGXT2L2 (I-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of AGXT2L2 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-163664 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

AGXT2L2 (I-14) is recommended for detection of AGXT2L2 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); non cross-reactive with AGXT2L1.

AGXT2L2 (I-14) is also recommended for detection of AGXT2L2 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for AGXT2L2 siRNA (h): sc-91684, AGXT2L2 siRNA (m): sc-140913, AGXT2L2 shRNA Plasmid (h): sc-91684-SH, AGXT2L2 shRNA Plasmid (m): sc-140913-SH, AGXT2L2 shRNA (h) Lentiviral Particles: sc-91684-V and AGXT2L2 shRNA (m) Lentiviral Particles: sc-140913-V.

Molecular Weight (predicted) of AGXT2L2: 50 kDa.

Molecular Weight (observed) of AGXT2L2: 44 kDa.

Positive Controls: mouse lung extract: sc-2390, mouse thymus extract: sc-2406 or KNRK whole cell lysate: sc-2214.

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.