SANTA CRUZ BIOTECHNOLOGY, INC.

HAO2 (N-17): sc-242989

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

HAO2 (hydroxyacid oxidase 2), also known as GIG16, cell growth-inhibiting gene 16 protein, long chain α-hydroxy acid oxidase or (S)-2-hydroxy-acid oxidase, peroxisomal, is a 351 amino acid protein that belongs to the FMN-dependent α-hydroxy acid dehydrogenase family. Containing an FMN hydroxy acid dehydrogenase domain, HAO2 utilizes FMN as a cofactor and catalyzes the oxidation of L-α-hydroxy acids and L-α-amino acids. Localizing to the peroxisome, HAO2 is expressed in liver and kidney. The gene encoding HAO2 maps to human chromosome 1p12, and is one of three related genes, including HAO1 and HAO3, that differ in sequence and expression, but contain 2-hydroxyacid oxidase activity. HAO1 is thought to play a role in the pathophysiology of hyperoxaluria type 1, which is caused by defects in AGXT, a peroxisomal enzyme, leading to accumulation of glyoxylate.

REFERENCES

1. Jones, J.M., et al. 2000. Identification and characterization of HAOX1, HAOX2, and HAOX3, three human peroxisomal 2-hydroxy acid oxidases. J. Biol. Chem. 275: 12590-12597.
2. Recalcati, S., et al. 2001. Peroxisomal targeting of mammalian hydroxyacid oxidase 1 requires the C-terminal tripeptide SKI. J. Cell Sci. 114: 1625-1629.
3. Recalcati, S., et al. 2003. Oxidative stress-mediated down-regulation of rat hydroxyacid oxidase 1, a liver-specific peroxisomal enzyme. Hepatology 38: 1159-1166.
4. Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. Nature 441: 315-321.
5. Guey, L.T., et al. 2010. Genetic susceptibility to distinct bladder cancer subphenotypes. Eur. Urol. 57: 283-292.

CHROMOSOMAL LOCATION

Genetic locus: HAO2 (human) mapping to 1p12.

SOURCE

HAO2 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of HAO2 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-242989 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

HAO2 (N-17) is recommended for detection of HAO2 of 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); non cross-reactive with HAO1 or HAO3.

Suitable for use as control antibody for HAO2 siRNA (h): sc-78639, HAO2 shRNA Plasmid (h): sc-78639-SH and HAO2 shRNA (h) Lentiviral Particles: sc-78639-V.

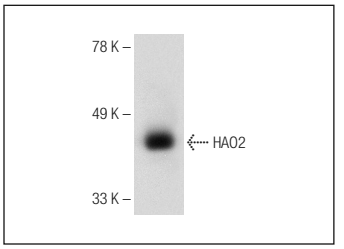
Molecular Weight of HAO2: 39 kDa.

Positive Controls: Human kidney tissue extract.

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



HAO2 (N-17): sc-242989. Western blot analysis of HAO2 expression in human kidney tissue extract.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.