SANTA CRUZ BIOTECHNOLOGY, INC.

KAO (L-17): sc-67655

BACKGROUND

Kidney amine oxidase (KAO), also called diamine oxidase (DAO) and amiloride-binding protein (ABP), is a member of the copper/topaquinone oxidase family. Notable compounds degraded by KAO include putrescine, Histamine, spermine and spermidine, as well as substances involved in allergic and immune responses, cell proliferation, tissue differentiation, tumor formation and possibly apoptosis. The secreted KAO protein can be detected in the extracellular space of placenta and kidney. Placental KAO is thought to play a role in the regulation of female reproductive function. KAO consists of two isoforms due to alternative splicing. Isoform 1 is the common 751 amino acid form while isoform 2 contains the additional 19 amino acids between residues 619 and 637.

REFERENCES

1. Valette, G., et al. 1954. Intracellular distribution of diamine oxidase (histaminase) in the pig kidney. C.R. Seances Soc. Biol. Fil. 148: 1762-1764.
2. Kapeller-Adler, R., et al. 1963. Purification and identification of hog-kidney histaminase. Biochim. Biophys. Acta 67: 542-565.
3. Bardsley, W.G., et al. 1972. Oxidation of p-dimethylaminomethylbenzylamine by pig kidney diamine oxidase. A new method for spectrophotometric assay. Biochem. J. 127: 875-879.
4. Matsumoto, T., et al. 1984. 3-(p-hydroxyphenyl)propionic acid as a new fluorogenic reagent for amine oxidase assays. Anal. Biochem. 138: 133-136.
5. Silva, I.J., et al. 1996. Superoxide anion radical generation during the oxidation of various amines by diamine oxidase. Free Radic. Res. 24: 167-175.
6. Gokturk, C., et al. 2004. Semicarbazide-sensitive amine oxidase in transgenic mice with diabetes. Biochem. Biophys. Res. Commun. 325: 1013-1020.
7. Stolen, C.M., et al. 2004. Semicarbazide sensitive amine oxidase overexpression has dual consequences: insulin mimicry and diabetes-like complications. FASEB J. 18: 702-704.
8. Mura, A., et al. 2006. Properties of copper-free pig kidney amine oxidase: role of topa quinone. FEBS Lett. 580: 4317-4324.
9. Mura, A., et al. 2007. An important lysine residue in copper/quinone-containing amine oxidases. FEBS J. 274: 2585-2595.

CHROMOSOMAL LOCATION

Genetic locus: ABP1 (human) mapping to 7q36.1.

SOURCE

KAO (L-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of KAO 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.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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-67655 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

KAO (L-17) is recommended for detection of KAO of 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).

Suitable for use as control antibody for KAO siRNA (h): sc-62519, KAO shRNA Plasmid (h): sc-62519-SH and KAO shRNA (h) Lentiviral Particles: sc-62519-V.

Molecular Weight of KAO monomer: 92 kDa.

Molecular Weight of KAO dimer: 180 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.

PROTOCOLS

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