

RAO (F-17): sc-21929

BACKGROUND

Copper amine oxidases utilize copper and a quinone cofactor to catalyze the oxidative conversion of amines into aldehydes and ammonia. Copper amine oxidases are conserved from bacteria to mammals, and display a high degree of sequence homology. Amine oxidases contain a conserved active site and a set of histidine residues, which coordinate copper. Human retina-specific amine oxidase-2, known as DAO2 or RAO, is a 729-amino acid protein that modulates signal transduction in the retina through pathways, which degrade biogenic amines, such as dopamine, histamine, and putrescine. Defects of the RAO gene may influence hereditary ocular diseases.

REFERENCES

1. Imamura, Y., Kubota, R., Wang, Y., Asakawa, S., Kudoh, J., Mashima, Y., Oguchi, Y. and Shimizu, N. 1997. Human retina-specific amine oxidase (RAO): cDNA cloning, tissue expression, and chromosomal mapping. *Genomics* 40: 277-283.
2. Imamura, Y., Noda, S., Mashima, Y., Kudoh, J., Oguchi, Y. and Shimizu, N. 1998. Human retina-specific amine oxidase: genomic structure of the gene (AOC2), alternatively spliced variant, and mRNA expression in retina. *Genomics* 51: 293-298.
3. den Hollander, A.I., van der Velde-Visser, S.D., Pinckers, A.J., Hoyng, C.B., Brunner, H.G. and Cremers, F.P. 1999. Refined mapping of the gene for autosomal dominant retinitis pigmentosa (RP17) on chromosome 17q22. *Hum. Genet.* 104: 73-76.
4. Online Mendelian Inheritance in Man, OMIM[™]. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 602268. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. LocusLink Report (LocusID: 314). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: AOC2 (human) mapping to 17q21.31; Aoc2 (mouse) mapping to 11 D.

SOURCE

RAO (F-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RAO 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-21929 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

RAO (F-17) is recommended for detection of RAO of human and, to a lesser extent, mouse and rat 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).

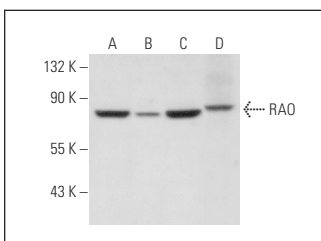
Suitable for use as control antibody for RAO siRNA (h): sc-40898, RAO siRNA (m): sc-40899, RAO shRNA Plasmid (h): sc-40898-SH, RAO shRNA Plasmid (m): sc-40899-SH, RAO shRNA (h) Lentiviral Particles: sc-40898-V and RAO shRNA (m) Lentiviral Particles: sc-40899-V.

Positive Controls: Jurkat whole cell lysate: sc-2204, K-562 whole cell lysate: sc-2203 or HeLa whole cell lysate: sc-2200.

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



RAO (F-17): sc-21929. Western blot analysis of RAO expression in Jurkat (A), HeLa (B) and K-562 (C) whole cell lysates and mouse thymus tissue extract (D).

PROTOCOLS

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