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AOX1 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6700c

Product Information

Application	FC, WB, E
Primary Accession	Q06278
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB19711
Calculated MW	147918
Antigen Region	698-726

Additional Information

Gene ID	316
Other Names	Aldehyde oxidase, Aldehyde oxidase 1, Azaheterocycle hydroxylase, 1173-, AOX1, AO
Target/Specificity	This AOX1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 698-726 amino acids from the Central region of human AOX1.
Dilution	FC~~1:10~50 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	AOX1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	AOX1 (HGNC:553)
Synonyms	AO
Function	Primarily catalyzes oxidation reactions of a broad range of drug and xenobiotic substrates and participates in their metabolism through oxidative

biotransformation (PubMed:14709625, PubMed:20444863, PubMed:22279051, PubMed:22996261, PubMed:23857892, PubMed:26322824, PubMed:26842593, PubMed:34415167, PubMed:7786031, PubMed:9224775). Oxidizes at least three structural types of substrates: aldehydes such as benzaldehyde, retinal, pyridoxal, and vanillin; aromatic azaheterocyclic compounds such as phthalazine, quinazoline and phenanthridine; and quaternary azaheterocyclic compounds such as 1-methylnicotinamide and nicotine imine (PubMed:14709625, PubMed:22279051, PubMed:22996261, PubMed:23857892, PubMed:26322824, PubMed:26842593, PubMed:34415167, PubMed:7786031, PubMed:9224775). Converts aldehydes to carboxylic acids, aromatic and quaternary azaheterocyclic compounds to lactams, typically by using molecular oxygen as the terminal electron acceptor and producing hydrogen peroxide as a by-product (PubMed:14709625, PubMed:22279051, PubMed:22996261, PubMed:23857892, PubMed:26322824, PubMed:26842593, PubMed:34415167, PubMed:7786031, PubMed:9224775). Under some conditions, especially with electron-deficient substrates or limited oxygen, can also catalyze reduction reactions using N-methylnicotinamide, 2-hydroxypyrimidine or benzaldehyde as electron donor substrate (Probable) (PubMed:15720138). These reductive activities include N-O bond reductions in nitro groups (e.g., imidacloprid, IMI), hydroxamic acids, and oxazoles (e.g., zonisamide), as well as N-S bond reductions of sulfoxides (e.g., sulindac) (By similarity).

Cellular Location

Cytoplasm

Tissue Location

Abundant in liver, expressed in adipose tissue and at lower levels in lung, skeletal muscle, pancreas. In contrast to mice, no significant gender difference in AOX1 expression level (at protein level).

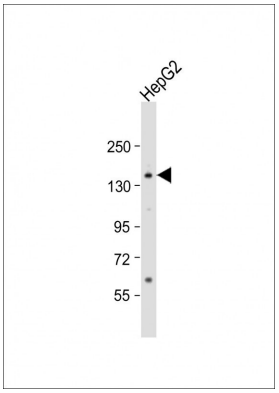
Background

AOX1 catalyzes: An aldehyde + H2O + O2 = a carboxylic acid + H2O2.

References

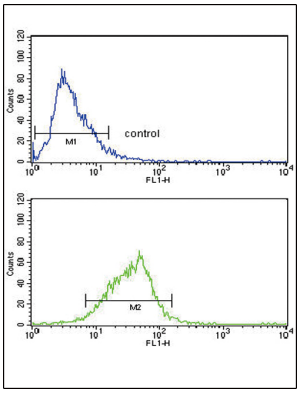
Wright,R.M., Proc. Natl. Acad. Sci. U.S.A. 90 (22), 10690-10694 (1993)

Images



Anti-AOX1 Antibody (Center) at 1:1000 dilution + HepG2 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 148 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

AOX1 Antibody (Center) (Cat.#AP6700c) flow cytometry analysis of HepG2 cells (bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated



goat-anti-rabbit secondary antibodies were used for the analysis.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.