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AKR1B1 Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52760

Product Information

Application	WB
Primary Accession	P15121
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	35853

Additional Information

Gene ID	231
Other Names	ADR; AKR1B 1;Akr1b1;Aldehyde reductase 1;Aldehyde reductase;Aldo keto reductase family 1, member B1;Aldo-keto reductase family 1 member B1;aldo-keto reductase family 1, member B1 (aldose reductase);Aldose reductase;aldr 1;ALDR_HUMAN;ALDR1;ALR2;AR;Lii5 2 CTCL tumor antigen;Low Km aldose reductase;MGC1804.
Dilution	WB~~1:1000
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

Name	AKR1B1
Synonyms	ALDR1, ALR2 {ECO:0000303|PubMed:17368668
Function	Catalyzes the NADPH-dependent reduction of a wide variety of carbonyl-containing compounds to their corresponding alcohols. Displays enzymatic activity towards endogenous metabolites such as aromatic and aliphatic aldehydes, ketones, monosacharides, bile acids and xenobiotics substrates. Key enzyme in the polyol pathway, catalyzes reduction of glucose to sorbitol during hyperglycemia (PubMed:1936586). Reduces steroids and their derivatives and prostaglandins. Displays low enzymatic activity toward all-trans-retinal, 9-cis-retinal, and 13-cis- retinal (PubMed:12732097, PubMed:19010934, PubMed:8343525). Catalyzes the reduction of diverse phospholipid aldehydes such as 1-palmitoyl-2- (5-oxovaleroyl)-sn

-glycero-3-phosphoethanolamin (POVPC) and related phospholipid aldehydes that are generated from the oxydation of phosphotidylcholine and phosphatdyleethanolamides (PubMed:17381426). Plays a role in detoxifying dietary and lipid-derived unsaturated carbonyls, such as crotonaldehyde, 4-hydroxynonenal, trans-2-hexenal, trans-2,4-hexadienal and their glutathione-conjugates carbonyls (GS- carbonyls) (PubMed:21329684).

Cellular Location Cytoplasm.

Tissue Location Highly expressed in embryonic epithelial cells (EUE) in response to osmotic stress.

Background

Catalyzes the NADPH-dependent reduction of a wide variety of carbonyl-containing compounds to their corresponding alcohols with a broad range of catalytic efficiencies.

References

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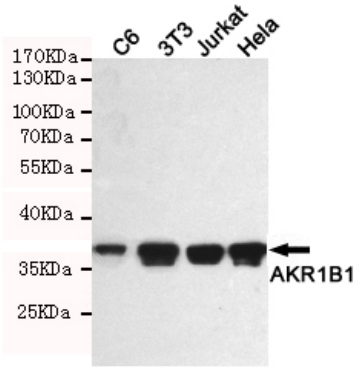
Chung S.,et al.J. Biol. Chem. 264:14775-14777(1989).
Graham A.,et al.Nucleic Acids Res. 17:8368-8368(1989).
Grundmann U.,et al.DNA Cell Biol. 9:149-157(1990).
Nishimura C.,et al.J. Biol. Chem. 265:9788-9792(1990).

Images



Western blot detection of AKR1B1 in C6,3T3,Jurkat and Hela cell lysates using AKR1B1 mouse mAb (1:1000 diluted). Predicted band size:36KDa. Observed band size:36KDa.