10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-Aldose Reductase Antibody

Catalog # AP59964

Product Information

Application	WB, IHC, IF/IC
Primary Accession	P15121
Reactivity	Human, Mouse, Rat, Mk
Host	Rabbit
Clonality	Polyclonal
Calculated MW	35853

Additional Information

Gene ID	231
Other Names	ALDR1; Aldose reductase; AR; Aldehyde reductase; Aldo-keto reductase family 1 member B1
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human Aldose Reductase. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000), IHC (1/100 - 1/200), IF/IC (1/100 - 1/500) IHC~~WB (1/500 - 1/1000), IHC (1/100 - 1/200), IF/IC (1/100 - 1/500) IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

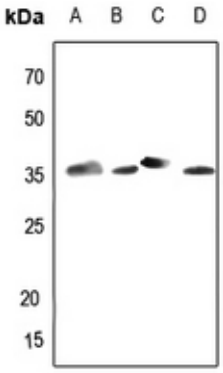
Name	AKR1B1
Synonyms	ALDR1, ALR2 {ECO:0000303|PubMed:17368668
Function	Catalyzes the NADPH-dependent reduction of a wide variety of carbonyl-containing compounds to their corresponding alcohols. Displays enzymatic activity towards endogenous metabolites such as aromatic and aliphatic aldehydes, ketones, monosaccharides, bile acids and xenobiotics substrates (PubMed:10510318, PubMed:12732097, PubMed:1332968, PubMed:21329684, PubMed:8245005, PubMed:4402695, PubMed:1936586). It catalyzes the reduction of glucose to sorbitol, the first step of the polyol pathway, an alternative route of glucose metabolism that converts glucose to fructose (PubMed:4402695, PubMed:1936586). This pathway becomes highly active under elevated glucose levels, such as 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).

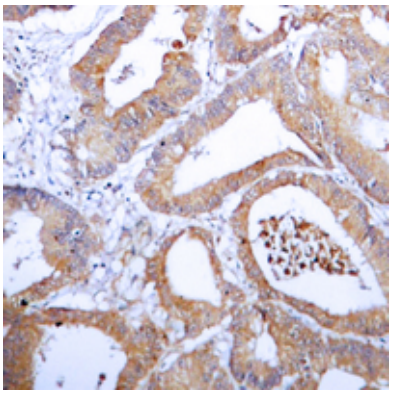
Cellular Location Cytoplasm.

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

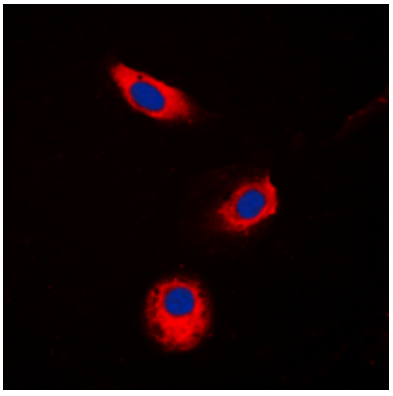
Images



Western blot analysis of Aldose Reductase expression in HEK293T (A), Hela (B), mouse testis (C), rat testis (D) whole cell lysates. (Predicted band size: 35 kD; Observed band size: 36 kD)

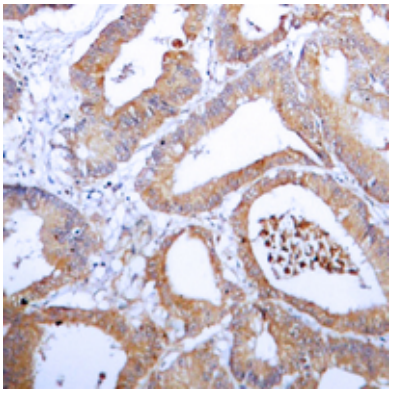


Immunohistochemical analysis of Aldose Reductase staining in human colon cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of Aldose Reductase staining in Jurkat cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).

Immunohistochemical analysis of Aldose Reductase staining in human colon cancer formalin fixed paraffin



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