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

AKR1B1 Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52760

Specification

AKR1B1 Antibody - Product Information

Application	**WB**
Primary Accession	P15121
Reactivity	**Human, Mouse**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG1**
Calculated MW	**36 KDa**

AKR1B1 Antibody - 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
PBS(pH 7.4) containing with 0.09% (W/V) sodium azide and 50% glycerol.

Storage
Store at -20 °C.Stable for 12 months from date of receipt

AKR1B1 Antibody - 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:<a

href="http://www.uniprot.org/citations/19010934" target="_blank">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.

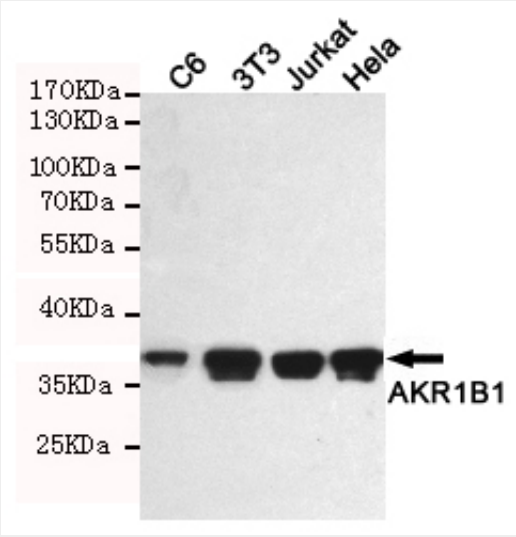
Tissue Location
Highly expressed in embryonic epithelial cells (EUE) in response to osmotic stress.

AKR1B1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

AKR1B1 Antibody - 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.

AKR1B1 Antibody - 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.

AKR1B1 Antibody - References

Bohren K.M.,et al.J. Biol. Chem. 264:9547-9551(1989).
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).