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KD-Validated Anti-AKR1B1 Mouse Monoclonal Antibody

Mouse monoclonal antibody
Catalog # AGI1973

Specification

KD-Validated Anti-AKR1B1 Mouse Monoclonal Antibody - Product Information

Application	**WB**
Primary Accession	P15121
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Mouse IgG1**
Calculated MW	**Predicted, 36 kDa, observed, 36 kDa KDa**
Gene Name	**AKR1B1**
Aliases	**AKR1B1; Aldo-Keto Reductase Family 1 Member B; AR; Aldose Reductase; ALDR1; Aldo-Keto Reductase Family 1 Member B1; EC 1.1.1.21; ALR2; Aldo-Keto Reductase Family 1, Member B1 (Aldose Reductase); Lii5-2 CTCL Tumor Antigen; Low Km Aldose Reductase; Aldehyde Reductase 1; Aldehyde Reductase; EC 1.1.1.300; EC 1.1.1.372; EC 1.1.1.54; EC 1.1.1; ADR**
Immunogen	**Recombinant protein of human AKR1B1**

KD-Validated Anti-AKR1B1 Mouse Monoclonal Antibody - Additional Information

Gene ID	**231**

Other Names
Aldo-keto reductase family 1 member B1, 1.1.1.21, 1.1.1.300, 1.1.1.372, 1.1.1.54, Aldehyde reductase, Aldose reductase, AR, AKR1B1, ALDR1, ALR2 {ECO:0000303|PubMed:17368668}

KD-Validated Anti-AKR1B1 Mouse Monoclonal 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: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.

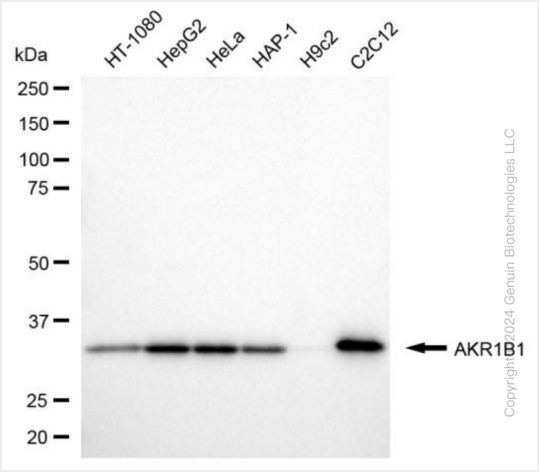
Tissue Location
Highly expressed in embryonic epithelial cells (EUE) in response to osmotic stress.

KD-Validated Anti-AKR1B1 Mouse Monoclonal 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

KD-Validated Anti-AKR1B1 Mouse Monoclonal Antibody - Images



Western blotting analysis using anti-AKR1B1 antibody (Cat#AGI1973). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-AKR1B1 antibody (Cat#AGI1973, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.

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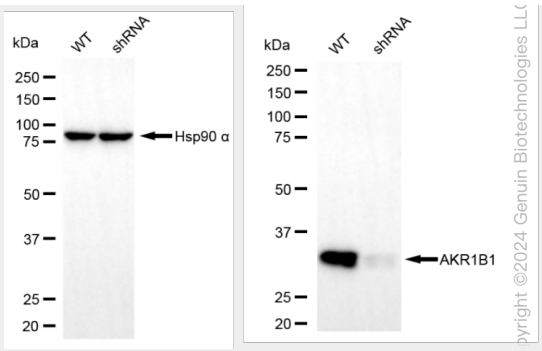

Western blotting analysis using anti-AKR1B1 antibody (Cat#AGI1973). AKR1B1 expression in wild-type (WT) and AKR1B1 shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-AKR1B1 antibody (Cat#AGI1973, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.