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AKR1B1 / Aldose Reductase Antibody (clone 2D12)

Mouse Monoclonal Antibody
Catalog # ALS14359

Specification

AKR1B1 / Aldose Reductase Antibody (clone 2D12) - Product Information

Application	**IHC**
Primary Accession	P15121
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Calculated MW	**36kDa KDa**

AKR1B1 / Aldose Reductase Antibody (clone 2D12) - Additional Information

Gene ID 231

Other Names
Aldose reductase, AR, 1.1.1.21, Aldehyde reductase, Aldo-keto reductase family 1 member B1, AKR1B1, ALDR1

Target/Specificity
Human AKR1B1

Reconstitution & Storage
Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.

Precautions
AKR1B1 / Aldose Reductase Antibody (clone 2D12) is for research use only and not for use in diagnostic or therapeutic procedures.

AKR1B1 / Aldose Reductase Antibody (clone 2D12) - 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.

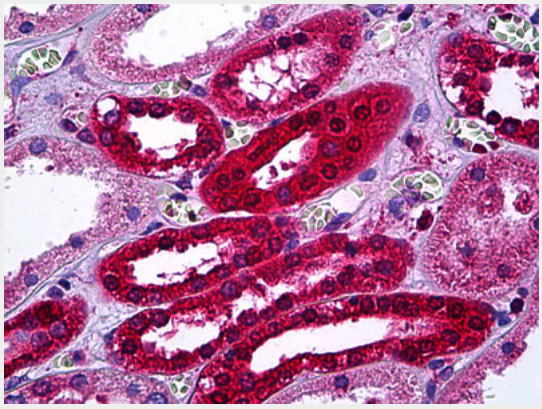
Tissue Location
Highly expressed in embryonic epithelial cells (EUE) in response to osmotic stress.

AKR1B1 / Aldose Reductase Antibody (clone 2D12) - 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 / Aldose Reductase Antibody (clone 2D12) - Images



Anti-AKR1B1 antibody IHC of human kidney, tubules.

AKR1B1 / Aldose Reductase Antibody (clone 2D12) - 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 / Aldose Reductase Antibody (clone 2D12) - References

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