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

AKR1B1 / Aldose Reductase Antibody (aa241-290)

Rabbit Polyclonal Antibody
Catalog # ALS16542

Specification

AKR1B1 / Aldose Reductase Antibody (aa241-290) - Product Information

Application	**IHC, WB**
Primary Accession	P15121
Other Accession	231
Reactivity	**Human, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**35853**

AKR1B1 / Aldose Reductase Antibody (aa241-290) - Additional Information

Gene ID 231

Other Names
AKR1B1, Aldose reductase, ALDR1, ADR, Aldehyde reductase, Aldehyde reductase 1, ALR2, Lii5-2 CTCL tumor antigen, Low Km aldose reductase

Target/Specificity
AKR1B1 Antibody detects endogenous levels of total AKR1B1 protein.

Reconstitution & Storage
PBS (without Mg2+, Ca2+), pH 7.4, 150 mM sodium chloride, 0.02% sodium azide, 50% glycerol. Store at -20°C for up to one year.

Precautions
AKR1B1 / Aldose Reductase Antibody (aa241-290) is for research use only and not for use in diagnostic or therapeutic procedures.

AKR1B1 / Aldose Reductase Antibody (aa241-290) - 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:<a

href="http://www.uniprot.org/citations/12732097" target="_blank">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.

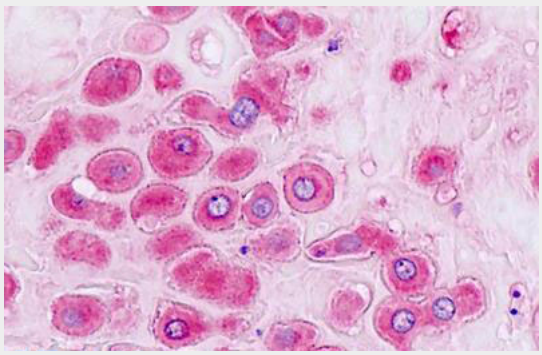
Volume
50 µl

AKR1B1 / Aldose Reductase Antibody (aa241-290) - 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 (aa241-290) - Images



Anti-AKR1B1 / Aldose Reductase antibody IHC staining of human placenta.

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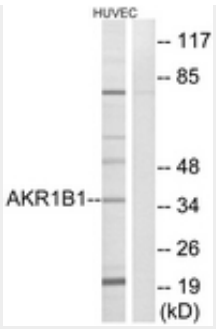

Western blot of extracts from HUVEC cells, using AKR1B1 Antibody.

AKR1B1 / Aldose Reductase Antibody (aa241-290) - 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 (aa241-290) - 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).