

# AKR1B1 Antibody (Center)

**ALTERNATE NAMES:** AKR1B1; ALDR1; Aldose reductase; Aldehyde reductase; Aldo-keto reductase family 1 member B1.

**CATALOG #:** 6740-100

**AMOUNT:** 100 µl

**HOST/ISOTYPE:** Rabbit IgG

**IMMUNOGEN:** This AKR1B1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 102-135 amino acids from the Central region of human AKR1B1.

**PURIFICATION:** This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

**MOLECULAR WEIGHT:** ~35.85 kDa

**FORM:** Liquid

**FORMULATION:** Supplied in PBS with 0.09% (W/V) sodium azide.

**SPECIES REACTIVITY:** Human.

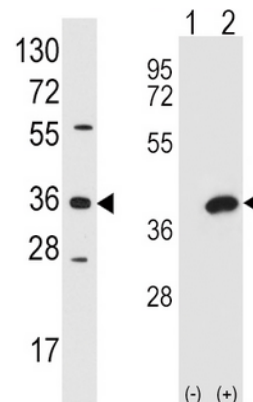
**STORAGE CONDITIONS:** Maintain refrigerated at 2-8°C for up to 6 months. For long term storage, store at -20°C in small aliquots to prevent freeze-thaw cycles.

**DESCRIPTION:** Aldose reductase (also designated AKR1B1, ALDR1, ALR2 or AR) is member of the monomeric NADPH-dependent aldo-ketoreductase family. Aldose reductase, which has a molecular mass of 36 kDa, catalyzes the reduction of various aldehydes and has been implicated in the development of diabetic complications by catalyzing the reduction of the aldehyde form of glucose, to the corresponding sugar alcohol, sorbitol. This pathway plays a minor role in glucose metabolism in most tissues, however in diabetic hyperglycemia, cells undergoing insulin-independent uptake of glucose accumulate significant quantities of sorbitol. The resulting hyperosmotic stress to cells may be a cause of diabetic complications such as neuropathy, retinopathy, and cataracts. Aldose reductase is very similar to human aldehyde reductase, bovine prostaglandin F synthase and to the European common frog protein, rho-crystallin.

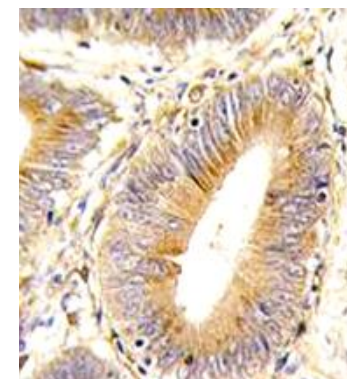
**APPLICATION:** Western blot: ~1:1000, IHC: ~1:10 – 1:50, IF: ~1:10 – 1:50.

**Note:** This information is only intended as a guide. The optimal dilutions must be determined by the user.

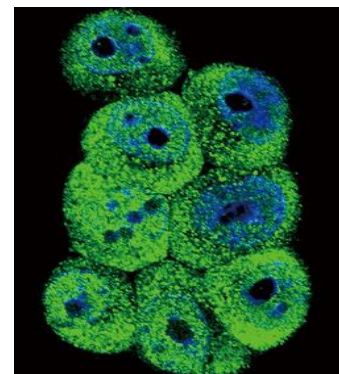
**FOR RESEARCH USE ONLY! Not to be used on humans.**



AKR1B1 Antibody western blot analysis in Jurkat cell lysate (35 µg/lane) and 293 cell lysates (2 µg/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2)



Formalin-fixed and paraffin-embedded human colon carcinoma tissue reacted with AKR1B1 antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining.



Confocal immunofluorescent analysis of AKR1B1 Antibody with 293 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit IgG (green). DAPI was used to stain the cell nuclear (blue).

**RELATED PRODUCTS:**

- Human recombinant ALDH2 (Cat. No. 6332-100)
- Human recombinant ALDH3A1 (Cat. No. 6333-50)
- Human recombinant AKR7A3 (Cat. No. 6334-50)
- Human recombinant AKR7A2 (Cat. No. 6335-50)
- Human recombinant AKR1C1 (Cat. No. 6336-50)
- Human recombinant AKR1C3 (Cat. No. 6337-50)
- Human recombinant AKR1B10 (Cat. No. 6339-50)