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32-6652: AKR1B1 Mouse

Application : Functional Assay

Alternative Name : Aldose reductase, AKR1B1, AR, Aldehyde reductase, Akr1b3, Aldor1, Aldr1, Akr1b1, Ahr-1, Ahr1, ALR2.

Description

Source: E.coli.
Sterile Filtered colorless solution.
AKR1B1 is part of the aldo/keto reductase superfamily, which consists of more than 40 known enzymes and proteins. AKR1B1 catalyzes the reduction several aldehydes, including the aldehyde form of glucose, and thus involved in the development of diabetic complications by catalyzing the reduction of glucose to sorbitol. AKR1B1 catalyzes the NADPH-dependent reduction of a wide variety of carbonyl-containing compounds to their corresponding alcohols. Transgenic mice over expressing human aldose reductase show that AKR1B1 is a key player in ischemic injury and impairment of functional and metabolic recovery after ischemia. Aldose Reductase is an obligatory mediator of TNF-alpha signaling leading to an increase in the expression of adhesion molecules and increased binding of monocytes to the endothelium. AKR1B1 is a critical regulator of TNF-alpha-induced apoptotic signaling in endothelial cells.
AKR1B1 Mouse Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 339 amino acids (1-316a.a.) and having a molecular mass of 38.1kDa.AKR1B1 is fused to a 23 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

Product Info

Amount : 5 µg / 20 µg

Purification : Greater than 95% as determined by SDS-PAGE.

Content : AKR1B1 protein solution (1mg/ml) containing Phosphate buffered saline (pH7.4), and 10% glycerol.

Storage condition : Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).Avoid multiple freeze-thaw cycles.

Amino Acid : MGSSHHHHHH SSGLVPRGSH MGSMASHLEL NNGTKMPTLG LGTWKSPPGQ VTEAVKVAID LGYRHIDCAQ VYQNEKEVGV ALQEKLKEQV VKRQDLFIVS KLWCTFHDKS MVKGAFQKTL SDLQLDYLDL YLIHWPTGFK PGPDYFPLDA SGNVIPSDTD FVDTWTAMEQ LVDEGLVKTI GVSNFNPLQI ERILNKPGLK YKPAVNQIEC HPYLTQEKLI EYCHSKGIVV TAYSPLGSPD RPWAKPEDPS LLEDPRIKAI AAKYNKTTAQ VLIRFPIQRN LVVIPKSVTP VRIAENLKVF DFEVSSEDMA TLLSYNRNWR VCALMSCAKH KDYPFHAEV.

Application Note

Specific activity is > 500 pmol/min/ug, and is defined as the amount of enzyme that catalyze the reduction of 1.0 pmole DL-glyceraldehyde in the presence of NADPH per minute at pH7.0 at 37C.