Recombinant Human AKR1A1 Protein (His Tag)

Catalog No. PKSH031070

Note: Centrifuge before opening to ensure complete recovery of vial contents.

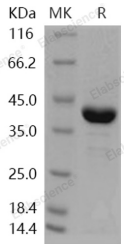
Description

Synonyms	ALDR1;ALR;ARM;DD3;HEL-S-6
Species	Human
Expression Host	E.coli
Sequence	Met 1-Tyr 325
Accession	P14550
Calculated Molecular Weight	39.0 kDa
Observed molecular weight	39 kDa
Tag	N-His
Bioactivity	Not validated for activity

Properties

Purity	> 90 % as determined by reducing SDS-PAGE.
Endotoxin	Please contact us for more information.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile PBS, pH 7.5 Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 90 % as determined by reducing SDS-PAGE.

Background

Aldehyde reductase (AKR1A1) is a member of the aldo-keto reductase superfamily, which consists of more than 40 known enzymes and proteins that includes variety of monomeric NADPH-dependent oxidoreductases, such as aldehyde

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reductase. Aldehyde reductase has wide substrate specificities for carbonyl compounds. These enzymes are implicated in the development of diabetic complications by catalyzing the reduction of glucose to sorbitol. Aldehyde reductase possess a structure with a beta-alpha-beta fold which contains a novel NADP-binding motif. The binding site is located in a large, deep, elliptical pocket in the C-terminal end of the beta sheet, the substrate being bound in an extended conformation. This binding is more similar to FAD- than to NAD(P)-binding oxidoreductases. AKR1A1 is involved in the reduction of biogenic and xenobiotic aldehydes and is present in virtually every tissue.

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