



Recombinant Protein Technical Manual

Recombinant Human AKR1A1 Protein (His Tag)

RPES0798

Product Data:

Product SKU: RPES0798

Size: 20µg

Species: Human

Expression host: E. coli

Uniprot: P14550

Protein Information:

Molecular Mass: 39 kDa

AP Molecular Mass: 39 kDa

Tag: N-His

Bio-activity:

Purity: > 90 % as determined by reducing SDS-PAGE.

Endotoxin: Please contact us for more information.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C 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

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: ALDR1;ALR;ARM;DD3;HEL-S-6

Immunogen Information:

Sequence: Met 1-Tyr 325

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 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.