

# Recombinant human Aldo-keto Reductase 1C3/AKR1C3 protein

Catalog Number: ATGP0270

## PRODUCT INFORMATION

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### Expression system

E.coli

### Domain

1-323aa

### UniProt No.

P42330

### NCBI Accession No.

NP\_003730.4

### Alternative Names

Aldo-keto reductase family 1 member C3, DD3, DDX, HA1753, HAKRB, HAKRe, hluPGFS, HSD17B5, Aldo-keto reductase family 1, member C3 17 beta HSD 5(HSD17B5), AKR1 C3, Chlordecone reductase, 17 beta hydroxysteroid dehydrogenase type 5, DDH1, PGFS, Prostaglandin F synthase

## PRODUCT SPECIFICATION

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### Molecular Weight

39 kDa (343aa) confirmed by MALDI-TOF

### Concentration

1mg/ml (determined by Bradford assay)

### Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 10% glycerol

### Purity

> 95% by SDS-PAGE

### Endotoxin level

< 1 EU per 1ug of protein (determined by LAL method)

### Biological Activity

Specific activity is > 1,000pmol/min/ug, and is defined as the amount of enzyme that catalyze the oxidation of 1.0pmole 1-Acenaphthenol in the presence of NADP per minute at pH 8.8 at 25C.

### Tag

His-Tag

### Application

SDS-PAGE, Enzyme Activity

### Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

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## BACKGROUND

### Description

AKR1C3, also known as PGFS, is a member of the aldo-keto reductase superfamily which catalyzes the conversion of aldehydes and ketones to their corresponding alcohols by utilizing NADH and/or NADPH as cofactors. This enzyme catalyzes the reduction of prostaglandin (PG) D2, PGH2 and phenanthrenequinone (PQ), and the oxidation of 9 alpha, 11 beta-PGF2 to PGD2. It may play an important role in the pathogenesis of allergic diseases such as asthma, and may also have a role in controlling cell growth and differentiation. Recombinant human AKR1C3 protein, fused to His-tag at N-terminus, was expressed in *E. coli* and purified by using conventional chromatography techniques.

### Amino acid Sequence

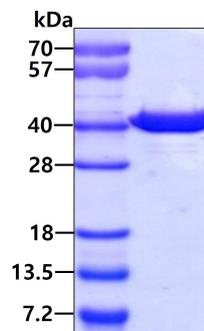
<MGSSHHHHHH SGLVPRGSH> MDSKHQCVKL NDGHFMPVLG FGTYAPPEVP RSKALEVTKL AIEAGFRHID SAHLYNNEEQ VGLAIRSKIA DGSVKREDIF YTSKLVSTFH RPELVPALE NSLKKAQLDY VDLYLIHSPM SLKPGEELSP TDENGKVFID IVDLCTTWEA MEKCKDAGLA KSIGVSNFNR RQLEMILNKP GLKYKPVSNQ VECHPYFNRS KLLDFCKSKD IVLVAYSALG SQDKRWVDP NSPVLLDPV LCALAKKHKR TPALIALRYQ LQRGVVVLAK SYNEQRIRQN VQVFEFQLTA EDMKAIDGLD RNLHYFNSDS FASHPNYPYS DEY

### General References

Davies N., et al. (2009) *Cancer Res.* 69(11):4769-75  
Kabutu Z., et al. (2009) *J Biochem.* 145(2):161-8

## DATA

### SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.