

Bioactive

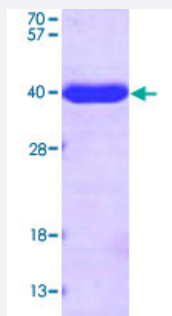
Full-Length

AKR1C3 (Human) Recombinant Protein

Catalog # P3481

Size 100 ug

Applications



Specification

Product Description

Human AKR1C3 (NP_003730, 1 a.a. - 323 a.a.) full-length recombinant protein with His tag expressed in *Escherichia coli*.

Sequence

MGSSHHHHHHSSGLVPRGSHMDSKHQCVKLNKGHFMPVLGFGTYAPPEVPRSKALEVTCLAIE
AGFRHIDSAHLYNNEEQVGLAIRSKIADGSVKREDIFYTSKLWSTFHRPELVRLPALENSLKKALDY
VDLYLIHSPMSLKPGEELSPTDENGKIVFDIVDLCTTWEAMEKCKDAGLAKSIGVSNFNRRQLEMI
LNKPGGLKYKPCVNQVECHPYFNRSKLLDFCKSKDMLVAYSALGSQRDKRWVDPNSPVLLDPV
LCALAKKHKRTPALIALRYQLQRGVVVLAKSYNEQRIRQNVQVFEFQLTAEDMKADGLDRNLHYF
NSDSFASHPNYPYSDEY

Host

Escherichia coli

Theoretical MW (kDa)

39

Form

Liquid

Preparation Method

Escherichia coli expression system

Purification

Conventional Chromatography

Concentration

1 mg/mL

Purity

> 95% by SDS-PAGE

Endotoxin Level	< 1.0 EU per 1 microgram of protein (determined by LAL method)
Activity	Specific activity: approximately > 0.1 units/mg. Enzymatic activity was confirmed by measuring the amount of enzyme catalyzing the oxidation of 1 umole NADPH per minute at 25°C. Specific activity was expressed as units/mg protein.
Quality Control Testing	Loading 3 ug protein in 15% SDS-PAGE
Storage Buffer	In 20 mM Tris-HCl buffer, pH 8.0 (10% glycerol).
Storage Instruction	Store at 2°C to 8°C for 1 week. For long term storage, aliquot and store at -20°C to -80°C. Aliquot to avoid repeated freezing and thawing.

Applications

- Functional Study
- SDS-PAGE

Gene Info — AKR1C3

Entrez GeneID	8644
Protein Accession#	NP_003730
Gene Name	AKR1C3
Gene Alias	DD3, DDX, HA1753, HAKRB, HAKRe, HSD17B5, KIAA0119, hluPGFS
Gene Description	aldo-keto reductase family 1, member C3 (3-alpha hydroxysteroid dehydrogenase, type II)
Omim ID	603966
Gene Ontology	Hyperlink
Gene Summary	This gene encodes a member of the aldo/keto reductase superfamily, which consists of more than 40 known enzymes and proteins. These enzymes catalyze the conversion of aldehydes and ketones to their corresponding alcohols by utilizing NADH and/or NADPH as cofactors. The enzymes display overlapping but distinct substrate specificity. This enzyme catalyzes the reduction of prostaglandin (PG) D2, PGH2 and phenanthrenequinone (PQ), and the oxidation of 9alpha,11beta-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/or differentiation. This gene shares high sequence identity with three other gene members and is clustered with those three genes at chromosome 10p15-p14. [provided by RefSeq]

Other Designations

OTTHUMP00000018996|aldo-keto reductase family 1, member C3|chlordecone reductase|dihydrodiol dehydrogenase 3|dihydrodiol dehydrogenase X|hydroxysteroid (17-beta) dehydrogenase 5|prostaglandin F synthase|trans-1,2-dihydrobenzene-1,2-diol dehydrogenase|type

Pathway

- [Arachidonic acid metabolism](#)
- [Metabolism of xenobiotics by cytochrome P450](#)

Disease

- [Adenocarcinoma](#)
- [Breast cancer](#)
- [Breast Neoplasms](#)
- [Ductus Arteriosus](#)
- [Esophageal Neoplasms](#)
- [Genetic Predisposition to Disease](#)
- [Hyperandrogenism](#)
- [Infant](#)
- [Leukemia](#)
- [Lung Neoplasms](#)
- [Lymphoma](#)
- [Neoplasms](#)
- [Obesity](#)
- [Ovarian cancer](#)
- [Ovarian Failure](#)
- [Ovarian Neoplasms](#)
- [Polycystic Ovary Syndrome](#)

- [Prostate cancer](#)
- [Prostatic Hyperplasia](#)
- [Prostatic Neoplasms](#)
- [Puberty](#)
- [Pulmonary Disease](#)
- [Thrombophilia](#)
- [Tobacco Use Disorder](#)
- [Urinary Bladder Neoplasms](#)
- [Werner syndrome](#)