OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850
UNITED STATES
Phone: +1-888-267-4436
Fax: +1-301-340-8606
techsupport@origene.com

OriGene Technologies GmbH
Schillerstr. 5
32052 Herford
GERMANY
Phone: +49-5221-34606-0
Fax: +49-5221-34606-11
info-de@origene.com

AR09154PU-N Recombinant human AKR1C3 (aa 1-323), His-tagged

Alternate names: 17-beta-hydroxysteroid dehydrogenase type 5, 2-dihydrobenzene-1, 2-diol dehydrogenase, 3-alpha-HSD type II, 3-alpha-HSD type II, 3-alpha-hydroxysteroid dehydrogenase type 2, Aldo-keto reductase family 1 member C3, Chlordecone reductase homolog HAKRb, Dihydrodiol dehydrogenase 3, Dihydrodiol dehydrogenase type I, HA1753, HSD17B5, KIAA0119, PGFS, Prostaglandin F synthase, Testosterone 17-beta-dehydrogenase 5, Trans-1, brain

Quantity: 0.1 mg

Concentration: 1.0 mg/ml (determined by Bradford assay)

Background: 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.

Uniprot ID: P42330

NCBI: NP_003730

GeneID: 8644

Species: Human

Source: E. coli

Format:
State: Liquid purified protein
Purity: >95% by SDS - PAGE
Buffer System: 20 mM Tris-HCl buffer (pH 8.0) containing 10% glycerol
Endotoxin Level: < 1.0 EU per 1 µg of protein (determined by LAL method)

Description: Recombinant human AKR1C3 protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.
AA Sequence:
MGSSHHHHHH SSGLVPRGSH MDSKHQCVKL NDGHFMPVLG FGTYAPPEVP RSKALEVTKL
AIEAGFRHID SAHLYNNEEQ VGLAIRSKIA DGSVKREDIF YTSKLWSTFH RPELVRPALE
NSLKKAQLDY VDLYLIHSPM SLKPGEELSP TDENGKVIFD IVDLCTTWEA MEKCKDAGLA
KSIGVSNFNR RQLEMILNKP GLKYKPVCNQ VECHPYFNRS KLLDFCKSKD IVLVAYSALG
SQRDKRWVDP NSPVLLEDPV LCALAKKHKR TPALIALRYQ LQRGVVVLAK SYNEQRIRQN
VQVFEFQLTA EDMKAIDGLD RNLHYFNSDS FASHPNYPYS DEY
Biological Activity: Specific activity is > 1,000 pmol/min/µg, and is defined as the amount of enzyme that catalyze the reduction of 1.0 pmole 1-Acenaphthenol presence of NADP per minute at pH 8.8 at 25°C.
Molecular weight: 39 kDa (343 aa), confirmed by MALDI-TOF

Storage:

Store undiluted at 2-8°C for up to two weeks or (in aliquots) at -20°C or -70°C for longer.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General Readings:

1. Davies NJ, Hayden RE, Simpson PJ, Birtwistle J, Mayer K, Ride JP, et al. AKR1C isoforms represent a novel cellular target for jasmonates alongside their mitochondrial-mediated effects. Cancer Res. 2009 Jun 1;69(11):4769-75. doi: 10.1158/0008-5472.CAN-08-4533. PubMed PMID: 19487289.
2. Kabututu Z, Manin M, Pointud JC, Maruyama T, Nagata N, Lambert S, et al. Prostaglandin F2alpha synthase activities of aldo-keto reductase 1B1, 1B3 and 1B7. J Biochem. 2009 Feb;145(2):161-8. doi: 10.1093/jb/mvn152. Epub 2008 Nov 14. PubMed PMID: 19010934.

Pictures:

Recombinant human AKR1C3 (1-323 aa), His-tagged: 15% SDS-PAGE (3 µg)