Recombinant human Aldo-keto Reductase 1C1/AKR1C1 protein

Catalog Number: ATGP0496

PRODUCT INFORMATION

Expression system
E.coli

Domain
1-323aa

UniProt No.
Q04828

NCBI Accession No.
NP_001344

Alternative Names
Aldo-keto reductase family 1 member C1, DDH1, DDH, MBAB, DD1, HAKRC, Dihydrodiol dehydrogenase 1, 20-alpha (3-alpha)-hydroxysteroid dehydrogenase, High-affinity hepatic bile acid-binding protein (HBAB)

PRODUCT SPECIFICATION

Molecular Weight
38.9 kDa (343aa) confirmed by MALDI-TOF

Concentration
0.5mg/ml (determined by Bradford assay)

Formulation
Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 1mM DTT, 20% glycerol

Purity
> 90% by SDS-PAGE

Biological Activity
Specific activity is > 500pmol/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.

BACKGROUND

Description
AKR1C1 is 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

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utilizing NADH and/or NADPH as cofactors. The enzymes display overlapping but distinct substrate specificity. This enzyme catalyzes the reduction of progesterone to the inactive form 20-alpha-hydroxy-progesterone. Recombinant AKR1C1 protein was expressed in E. coli and purified by using conventional chromatography techniques.

Amino acid Sequence

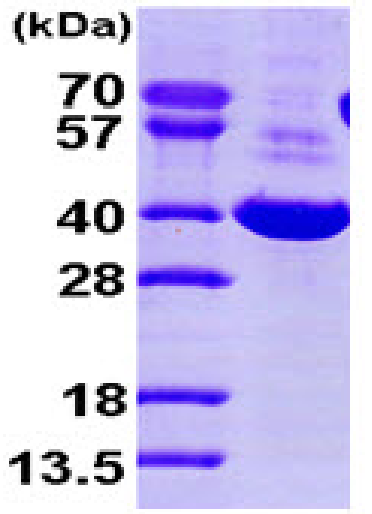
MGSSHHHHHH SSGLVPRGSH MDSKYQCVKL NDGHFMPVLG FGTYAPAEVP KSKALEATKL AIEAGFRHID SAHLYNNEEQ VGLAIRSKIA DGSVKREDIF YTSKLWCNSH RPELVRPALE RSLKNLQLDY VDLYLIHFPV SVKPGEEVIP KDENGKILFD TVDLCATWEA VEKCKDAGLA KSIGVSNFNR RQLEMILNKP GLKYKPVCNQ VECHPYFNQR KLLDFCKSKD IVLVAYSALG SHREEPWVDP NSPVLLEDPV LCALAKKHKR TPALIALRYQ LQRGVVVLAK SYNEQRIRQN VQVFEFQLTS EEMKAIDGLN RNVRYLTLDI FAGPPNYPFS DEY

General References

Zhang Y., et al. (2000) J. Mol. Endocrinol. 25:221-228
Zhang Y., et al. (2009) Mol Cell Endicrinol. 298(1-2):76-83

DATA

SDS-PAGE



15% SDS-PAGE (3ug)

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