

Recombinant human Aldo-keto reductase 7A3/AKR7A3 protein

Catalog Number: ATGP3286

PRODUCT INFORMATION

Expression system

E.coli

Domain

1-331aa

UniProt No.

O95154

NCBI Accession No.

AAH25709

Alternative Names

Aldo-keto reductase family 7 member A 3, Aflatoxin B1 aldehyde reductase member 3, AFB1 aldehyde reductase 2(AFAR2), AFB1 AR 2, Aflatoxin aldehyde reductase, Aflatoxin B1 aldehyde reductase 2

PRODUCT SPECIFICATION

Molecular Weight

37.7 kDa (331aa)

Concentration

1mg/ml (determined by Bradford assay)

Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.5) containing 10% glycerol

Purity

> 90% by SDS-PAGE

Endotoxin level

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

Biological Activity

Specific activity is > 800pmol/min/ug, and is defined as the amount of enzyme that catalyze the reduction 1.0pmole of 1,2-Naphthoquinone presence of NADPH per minute at pH 7.0 at 25C.

Tag

Non-Tagged

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

Aldo-keto reductase family 7, member A 3, also known as AKR7A3, is a member of the aldo/keto reductase superfamily, which consists of more than 40 known enzymes and proteins. This member includes a number of related monomeric NADPH-dependent oxidoreductases, such as aldehyde reductase, aldose reductase, prostaglandin F synthase, xylose reductase, rho crystallin, and many others. AKR7A3 is involved in the detoxification of aldehydes and ketones. The activity of AKR7A3 may detoxify the aflatoxin B1 (AFB1) dialdehyde, which reacts with proteins, and thereby inhibits AFB 1 induced toxicity. Recombinant human AKR7A3 was expressed in *E. coli* and purified by using conventional chromatography techniques.

Amino acid Sequence

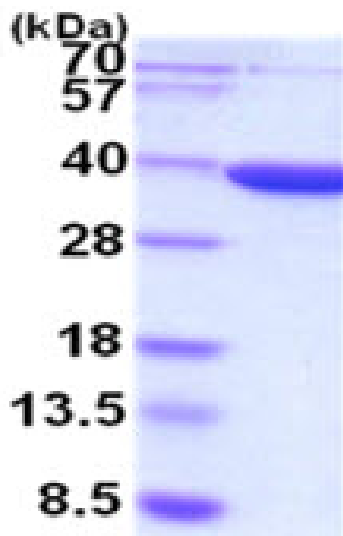
MSRQLSRARP ATVLGAMEMG RRMDAPTSAA VTRAFLEGRH TEIDTAFVYS EGQSETILGG LGLRLGGSDC RVKIDTKAIP LFGNSLKPDS LRFQLETSK RLQCPRVDLF YLHMPDHSTP VEETLRACHQ LHQEGKFVEL GLSNYAWEV AEICTLCKSN GWILPTVYQG MYNAITRQVE TELFPCRHF GLRFYAFNPL AGLLTGKYG YEDKDGKQPV GRFFGNTWAE MYRNRYWKEH HFEGIALVEK ALQAAYGASA PSMTSATLRW MYHHSQLQGA HGDAVILGMS SLEQLEQNLA AAEEGGLEPA VVDAFNQAWH LVAHECPNYF R

General References

Ahmed MM., et al. (2011) *Hepatology*. 54(4):1322-32.
Bodreddiqari S., et al. (2008) *Chem Res Toxicol*. 21(5):1134-42.

DATA

SDS-PAGE



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

15% SDS-PAGE (3ug)