

AKR7A3, 1-331aa

Human, Recombinant, *E.coli*

Cat. No. IBATGP3286

Full name: Aldo-keto reductase family 7, member A 3

NCBI Accession No.: AAH25709

Synonyms: Aflatoxin B1 aldehyde reductase member 3, AFB1 aldehyde reductase 2(AFAR2)

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.

Form: Liquid. In 20mM Tris-HCl buffer (pH8.5) containing 10% glycerol

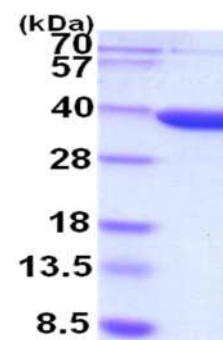
Molecular Weight: 37.7 kDa (331aa)

Purity: > 90% by SDS - PAGE

Concentration: 1 mg/ml (determined by Bradford assay)

Endotoxin Level: < 1.0 EU per 1 µg of protein (determined by LAL method)

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



15% SDS-PAGE (3ug)

Sequences of aminoacids:

MSRQLSRARP ATVLGAMEMG RRMDAPTSAA VTRAFLEGRH TEIDTAFVYS EGQSETILGG LGLRLGGSDC RVKIDTKAIP LFGNSLKPDS
LRFQLETSLK RLQCPDVDLF YLHMPDHSTP VEETLRACHQ LHQEGKFVEL GLSNYAWEV AEICTLCKSN GWILPTVYQG MYNAITRQVE
TELPCLRHF GLRFYAFNPL AGLLTGKYK YEDKDGKQPV GRFFGNTWAE MYRNRWKEH HFEGIALVEK ALQAAYGASA PSMTSATLRW
MYHHSQLQGA HGDAVILGMS SLEQLEQNLA AAEEGPLEPA 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.

Storage: Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C.
Avoid repeated freezing and thawing cycles.

For research use only. This product is not intended or approved for human, diagnostics or veterinary use.



Manufactured for:

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