

AKR7A2, 1-359aa

Human, His-tagged, Recombinant, *E.coli*

Cat. No. IBATGP0478

Full name: Aldo-keto reductase family 7, member A 2

NCBI Accession No.: NP_003680

Synonyms: Aflatoxin B1 aldehyde reductase member 2, AFAR, AFAR1, AFB1-AR1, AKR7

Description: Aldo-keto reductases, such as AKR7A2, are involved in the detoxification of aldehydes and ketones. This protein can reduce the dialdehyde protein-binding form of aflatoxin B1 (AFB1) to the nonbinding AFB1 dialcohol. It may be involved in protection of liver against the toxic and carcinogenic effects of AFB1, a potent hepatocarcinogen. Also, it has been proposed previously to catalyze the NADPH-dependent reduction of succinic semialdehyde (SSA) to gamma-Hydroxybutyrate in human brain. Recombinant AKR7A2 protein was expressed in *E.coli* and purified by using conventional chromatography techniques.

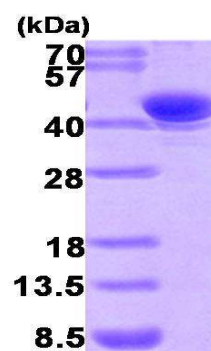
Form: Liquid. In 20mM Tris-HCl buffer (pH8.0) containing 1mM DTT, 20% glycerol

Molecular Weight: 44.0kDa (398aa), confirmed by MALDI-TOF

Purity: > 90% by SDS - PAGE

Concentration: 0.5 mg/ml (determined by Bradford assay)

Biological activity: Specific activity is > 1000 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:

MRGSHHHHHH GMASMTGGQQ MGRDLYDDDD KDRWGSELEM LSAASRVVSR AAVHCALRSP PPEARALAMS RPPPPRVASV LGTMEMGRRM
DAPASAAAVR AFLERGHTEL DTAFMYSDDG SETILGGLGL GLGGGDCRVK IATKANPWDG KSLKPDSVRS QLETSLKRLQ CPQVDLFYLH
APDHGTPVEE TLHACQRLHQ EGKFVELGLS NYASWEVAEI CTLOCKNGWI LPTVYQGMYN ATTRQVETEL FPCLRHFLGR FYAYNPLAGG
LLTGKYKYED KDGKQPVGRF FGNSWAETYR NRFWKEHHFE AIALVEKALQ AAYGASAPSV TSAALRWMYH HSQQLQGAHGD AVILGMSLSLE
QLEQNLAATE EGPLEPAVVD AFNQAWHLVA HECPNYFR

General references:

Bodreddigari S., *et al.* (2008) *Chem Res Toxicol.* 21(5):1134-42.

Malaspina P., *et al.* (2009) *Hum Genomics.* 3(2):106-20.

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:
Immuno-Biological Laboratories, Inc. (IBL-America)
8201 Central Ave. NE, Suite P, Minneapolis, Minnesota 55432, USA
Phone: (888) 523-1246 Fax.: (763) 780-2988
Email: info@ibl-america.com Web: www.ibl-america.com