

AKR7A2 Human

Description: AKR7A2 Human Recombinant fused to a 39 amino acid His Tag at N-terminal produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 398 amino acids (1-359 a.a) and having a molecular mass of 44 kDa. The AKR7A2 is purified by proprietary chromatographic techniques.

Synonyms: Aflatoxin B1 aldehyde reductase member 2, AFAR, AFAR1, AFB1-AR1, AKR7, Succinic semialdehyde reductase, SSA reductase, AFB1 aldehyde reductase 1, Aldoketoreductase 7, AKR7A2.

Source: Escherichia Coli.

Physical Appearance: Sterile Filtered clear colorless solution.

Amino Acid Sequence: MRGSHHHHHH GMASMTGGQQ MGRDLYDDDD KDRWGSELEM
LSAASRVVSR AAVHCALRSP PPEARALAMS RPPPPRVASV LGTMEMGRRM DAPASAAAVR
AFLERGHTEL DTAFMYS DGQ SETILGGLGL GLGGGDCRVK IATKANPWDG KSLKPDSVRS
QLETSLKRLQ CPQVDLFYLH APDHGTPVEE TLHACQRLHQ EGKFVELGLS NYASWEVAEI
CTLCKSNGWI LP

Purity: Greater than 90.0% as determined by SDS-PAGE.

Formulation:

The AKR7A2 solution contains 20mM Tris-HCl pH-8, 1mM DTT and 20% glycerol.

Stability:

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

Introduction:

AKR7A2 participates in the detoxification of aldehydes and ketones. AKR7A2 catalyzes the NADPH-dependent reduction of succinic semialdehyde to gamma-hydroxybutyrate. AKR7A2 is involved in producing the neuromodulator gamma-hydroxybutyrate (GHB). AKR7A2 has extensive substrate specificity. AKR7A2 shows NADPH-dependent aldehyde reductase activity towards 2-carboxybenzaldehyde, 2-nitrobenzaldehyde and pyridine-2-aldehyde (in vitro). AKR7A2 reduces 1,2-naphthoquinone and 9,10-phenanthrenequinone (in vitro). AKR7A2 reduces the dialdehyde protein-binding form of aflatoxin B1 (AFB1) to the non-binding AFB1 dialcohol. AKR7A2 takes part in protection of liver against the toxic and carcinogenic effects of AFB1, a potent hepatocarcinogen.

Biological Activity:

Specific activity: approximately 0.25-0.3 units/mg. Enzymatic activity was confirmed by measuring the amount of enzyme catalyzing the oxidation of 1 micromole NADPH per minute at 25°C. Specific activity was expressed as units/mg protein.

Catalog #:ENPS-492

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