

32-2139: AKR7A2 Recombinant Protein

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

Description

Source : Escherichia Coli. 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. 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.

Product Info

Amount :	20 µg
Purification :	Greater than 90.0% as determined by SDS-PAGE.
Content :	The AKR7A2 solution contains 20mM Tris-HCl pH-8, 1mM DTT and 20% glycerol.
Storage condition :	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.
Amino Acid :	MRGSHHHHHH GMASMTGGQQ MGRDLYDDDD KDRWGSELEM LSAASRVVSR AAVHCALRSP PPEARALAMS RPPPPRVASV LGTMEMGRRM DAPASAAVR AFLERGHTEL DTAFMYSDGQ SETILGGLGL GLGGGDCRVK IATKANPWDG KSLKPDSVRS QLETSLKRLQ CPQVDLFYLH APDHGTPVEE TLHACQRLHQ EGKFVELGLS NYASWEVAEI CTLCKSNGWI LPTVYQGMYN ATTRQVETEL FPCLRHFLGR FYAYNPLAGG LLTGKYYKED KDGKQPVGRF FGNSWAETYR NRFWKEHHFE AIALVEKALQ AAYGASAPSV TSAALRWMYH HSQIQGAHGD AVILGMSSLE QLEQNLAATE EGGLEPAVVD AFNQAWHLVA HECPNYFR.

Application Note

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 25C. Specific activity was expressed as units/mg protein.