Recombinant ARK72 protein (His tag)

Catalog Number	539482
Synonyms	AFB1 aldehyde reductase 1; AFB1-AR 1; Aldoketoreductase 7; Succinic semialdehyde reductase; SSA reductase
Species	Human
Expression System	E. coli
Accession	O43488
Molecular Weight	Predictes a molecular mass of 37.26 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 37 kDa band.

Product Information

Sequence Region	39-359
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 39-359 aa (O43488) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human Aflatoxin B1 Aldehyde Reductase Member 2 (AKR7A2) Fragment (residues 39-359) is a high-purity protein designed for structural and biochemical studies. This 321-amino acid fragment retains key functional domains, offering a stable and soluble unit ideal for investigating detoxification mechanisms and enzymatic activity related to aflatoxin metabolism and neuromodulator synthesis. The full-length Aflatoxin B1 Aldehyde Reductase Member 2 (AKR7A2) is a human enzyme that catalyzes the NADPH-dependent reduction of succinic semialdehyde to gamma-hydroxybutyrate (GHB), potentially contributing to neuromodulator production. It exhibits broad substrate specificity, reducing various aldehydes and quinones, and plays a critical role in detoxification by converting the protein-binding form of aflatoxin B1 (AFB1) to a non-binding dialcohol, thereby protecting the liver from this hepatocarcinogen's toxic and carcinogenic effects. The protein is localized to the mitochondrion, Golgi apparatus, and cytoplasm, underscoring its involvement in diverse cellular processes.