

## Aldolase B Protein, Human (N-GST)

<b>Cat. No.:</b>	HY-P74419A
<b>Synonyms:</b>	Fructose-bisphosphate aldolase B; ALDOB; ALDB; Liver-type aldolase
<b>Species:</b>	Human
<b>Source:</b>	E. coli
<b>Accession:</b>	P05062 (A2-Y364)
<b>Gene ID:</b>	229
<b>Molecular Weight:</b>	Approximately 60 KDa

### PROPERTIES

<b>AA Sequence</b>	<pre> A H R F P A L T Q E   Q K K E L S E I A Q   S I V A N G K G I L   A A D E S V G T M G N R L Q R I K V E N   T E E N R R Q F R E   I L F S V D S S I N   Q S I G G V I L F H E T L Y Q K D S Q G   K L F R N I L K E K   G I V V G I K L D Q   G G A P L A G T N K E T T I Q G L D G L   S E R C A Q Y K K D   G V D F G K W R A V   L R I A D Q C P S S L A I Q E N A N A L   A R Y A S I C Q Q N   G L V P I V E P E V   I P D G D H D L E H C Q Y V T E K V L A   A V Y K A L N D H H   V Y L E G T L L K P   N M V T A G H A C T K K Y T P E Q V A M   A T V T A L H R T V   P A A V P G I C F L   S G G M S E E D A T L N L N A I N L C P   L P K P W K L S F S   Y G R A L Q A S A L   A A W G G K A A N K E A T Q E A F M K R   A M A N C Q A A K G   Q Y V H T G S S G A   A S T Q S L F T A C Y T Y </pre>
<b>Biological Activity</b>	Measured by its ability to catalyzes the decomposition of fructose 1,6 bisphosphate in the presence of NADH. The specific activity is 4.1 U/mg.
<b>Appearance</b>	Lyophilized powder
<b>Formulation</b>	Lyophilized from a 0.2 µm solution of PBS, pH 7.4
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in sterile distilled water. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
<b>Storage &amp; Stability</b>	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

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**Background**

Aldolase B protein serves a pivotal role in glycolysis by catalyzing the aldol cleavage of fructose 1,6-bisphosphate into dihydroxyacetone phosphate and D-glyceraldehyde 3-phosphate, as well as the reverse stereospecific aldol addition reaction in gluconeogenesis. Additionally, in fructolysis, it metabolizes fructose 1-phosphate, derived from the phosphorylation of dietary fructose by fructokinase, into dihydroxyacetone phosphate and D-glyceraldehyde. Beyond its enzymatic function, Aldolase B acts as an adapter and functions as a tumor suppressor by stabilizing a ternary complex with G6PD and TP53, inhibiting G6PD activity. This regulatory mechanism helps maintain control over oxidative pentose phosphate metabolism, contributing to the overall balance of cellular metabolic pathways.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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