ADH5 Protein, Human (GST)

Cat. No.:	HY-P701930
Synonyms:	ADH5; Alcohol dehydrogenase class-3; Alcohol dehydrogenase 5; Alcohol dehydrogenase class chi chain; Alcohol dehydrogenase class-III; Glutathione-dependent formaldehyde dehydrogenase; FALDH; FDH; GSH-FDH; S-(hydroxymethyl)glutathione dehydrogenase
Species:	Human
Source:	E. coli
Accession:	P11766 (M1-I374)
Gene ID:	128
Molecular Weight:	

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 μm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	Please use rapid thawing with running water to thaw the protein.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	ADH5, a Class-III alcohol dehydrogenase, plays a pivotal role in cellular detoxification processes by catalyzing the oxidation of long-chain primary alcohols and S-(hydroxymethyl) glutathione. Additionally, ADH5 is involved in the oxidation of long-chain omega-hydroxy fatty acids, such as 20-hydroxyeicosatetraenoic acid (20-HETE), yielding both the intermediate aldehyde, 20-oxoarachidonate, and the final product, a dicarboxylic acid, (5Z,8Z,11Z,14Z)-eicosatetraenedioate. Despite its classification as an alcohol dehydrogenase, ADH5 exhibits low efficiency in oxidizing ethanol. Notably, ADH5 is crucial for cellular defense against formaldehyde, a cytotoxic and carcinogenic metabolite, contributing to the clearance of this substance and preventing potential DNA damage.

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