
Product Data Sheet

Product Name: ALDH5A1 Human

Cat. No.: GP21390

Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.

Synonyms Succinate-semialdehyde dehydrogenase mitochondrial; Aldehyde dehydrogenase family 5 member A1; NAD(+)-dependent succinic semialdehyde dehydrogenase; ALDH5A1; SSADH; SSDH.

Amino Acid Sequence MGSSHHHHHH SGLVPRGSH MAGRLAGLSA ALLRTDSFVG GRWLPAAATF PVQDPASGAA LGMVADCGVR EARAAVRAAY EAFCRWREVS AKERSLLRK WYNLMIQNKD DLARIITAES GKPLKEAHGE ILYSAFFLEW FSEEARRVYG DIIHTPAKDR RALVLKQPIG VAAVITPWNF PSAMITRKVG AALAAGCTVV VKPAEDTPFS ALALAEASQ AGIPSGVYNV IPCSRKNAKE VGEAICTDPL VSKISFTGST TTGKILLHHA ANSVKRVSME LGGLAPFIVF DSANVDQAVA GAMASKFRNT GQTCVCSNQF LVQRGIHDAF VKAF AEAMKK NLRVGN GFEE GTTQGPLINE KAVEKVEKQV NDAVSKGATV VTGGKRHQLG KNFFEPTLLC NVTQDMLCTH EETFGPLAPV IKFDTEEEAI AIANAADVGL AGYFYSQDPA QIWRVAEQLE VGMVGVNEGL ISSVECPFGG VKQSGLGREG SKYGIDEYLE LKYVCYGGL.

Formulation The ALDH5A1 solution (0.5 mg/ml) contains 20mM Tris-HCl buffer(pH 8.0), 10% glycerol 1mM DTT, 0.1M NaCl and 1mM EDTA.

Introduction

ALDH5A1 is a mitochondrial NAD(+)-dependent succinic semialdehyde dehydrogenase, which is a member of the aldehyde dehydrogenase family of proteins. The ALDH5A1 protein functions as a mediator to the NADP+-dependent oxidation of aldehydes into acids and has an imperative role in the detoxification of alcohol-derived acetaldehyde, as well as in lipid peroxidation and in the metabolism of corticosteroids, biogenic amines and neurotransmitters. ALDH5A1 is expressed in various tissues, including the liver, heart, lung, brain, kidney and placenta. Deficiency in the ALDH5A1 enzyme, known as 4-

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

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hydroxybutyricaciduria, is a rare inborn error in the metabolism of the neurotransmitter 4-aminobutyric acid (GABA). In response to this defect, physiologic fluids from patients accumulate GHB, which is a compound with numerous neuromodulatory properties.

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.

Background

ALDH5A1 Human Recombinant fused with a 20 amino acid His tag at N-terminus produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 509 amino acids (48-535 a.a.) and having a molecular mass of 54.6kDa. The ALDH5A1 is purified by proprietary chromatographic techniques.

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