ALDH1A2 Protein, Human (P.pastoris, His)

Cat. No.:	HY-P700646
Synonyms:	rHuAldehyde Dehydrogenase 1-A2, His ; ALDH-1A2; Aldehyde Dehydrogenase 1-A2
Species:	Human
Source:	P. pastoris
Accession:	O94788 (M1-S518)
Gene ID:	8854
Molecular Weight:	58.7 kDa

PROPERTIES

AA Sequence	MTSSKIEMPG EVKADPAALM ASLHLLPSPT PNLEIKYTKI FINNEWQNSE SGRVFPVYNP ATGEQVCEVQ EADKADIDKA VQAARLAFSL GSVWRRMDAS ERGRLLDKLA DLVERDRAVL ATMESLNGGK PFLQAFYVDL QGVIKTFRYY AGWADKIHGM TIPVDGDYFT FTRHEPIGVC GQIIPWNFPL LMFAWKIAPA LCCGNTVVIK PAEQTPLSAL YMGALIKEAG FPPGVINILP GYGPTAGAAI ASHIGIDKIA FTGSTEVGKL IQEAAGRSNL KRVTLELGGK SPNIIFADAD LDYAVEQAHQ GVFFNQGQCC TAGSRIFVEE SIYEEFVRRS VERAKRRVVG SPFDPTTEQG PQIDKKQYNK ILELIQSGVA EGAKLECGGK GLGRKGFFIE PTVFSNVTDD MRIAKEEIFG PVQEILRFKT MDEVIERANN SDFGLVAAVF TNDINKALTV SSAMQAGTVW INCYNALNAQ SPFGGFKMSG NGREMGEFGL REYSEVKTVT VKIPQKNS
Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized a 0.22 μm filtered solution of Tris-based buffer,50% glycerol.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	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.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	ALDH1A2 protein plays a pivotal role in the NAD-dependent oxidation of various aldehyde substrates, such as all-trans-retinal and all-trans-13,14-dihydroretinal, converting them into their corresponding carboxylic acids, namely all-trans-retinoate and all-trans-13,14-dihydroretinoate. This enzymatic activity is essential for retinoate signaling, a process critical for the transcriptional control of numerous genes and notably crucial for the initiation of meiosis in both male and female organisms. ALDH1A2 can recognize retinal as a substrate, whether in its free form or when bound to cellular retinol-binding protein. While displaying the capability to metabolize octanal and decanal, ALDH1A2 exhibits only minimal activity with benzaldehyde, acetaldehyde, and propanal. Interestingly, it completely lacks activity with citral.

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