Recombinant Human Aldehyde Dehydrogenase 1 Family, Member A1

Cat. No. ALDH1A1-484H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human ALDH1A1 protein was expressed in*E.coli*and purified by using conventional chromatography techniques. MW = 54.8 kDa (501aa).
Species	Human
Source	E.coli
Description	Aldehyde dehydrogenase 1A1 (ALDH1A1), also known as retinal dehydrogenase 1, is the second enzyme of the major oxidative pathway of alcohol metabolism. Two major liver isoforms of this enzyme, cytosolic and mitochondrial, can be distinguished by their electrophoretic mobilities, kinetic properties, and subcellular localizations. ALDH1A1 also belongs to the group of corneal crystallins that help maintain the transparency of the cornea. (Retinal + NAD+ + H2O = retinoate + NADH).
Amino Acid Sequence	MSSSGTPDLP VLLTDLKIQY TKIFINNEWH DSVSGKKFPV FNPATEEELC QVEEGDKEDV DKAVKAARQA FQIGSPWRTM DASERGRLLY KLADLIERDR LLLATMESMN GGKLYSNAYL NDLAGCIKTL RYCAGWADKI QGRTIPIDGN FFTYTRHEPI GVCGQIIPWN FPLVMLIWKI GPALSCGNTV VVKPAEQTPL TALHVASLIK EAGFPPGVVN IVPGYGPTAG AAISSHMDID KVAFTGSTEV GKLIKEAAGK SNLKRVTLEL GGKSPCIVLA DADLDNAVEF AHHGVFYHQG QCCIAASRIF VEESIYDEFV RRSVERAKKY ILGNPLTPGV TQGPQIDKEQ YDKILDLIES GKKEGAKLEC GGGPWGNKGY FVQPTVFSNV TDEMRIAKEE IFGPVQQIMK FKSLDDVIKR ANNTFYGLSA GVFTKDIDKA ITISSALQAG

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	TVWVNCYGVV SAQCPFGGFK MSGNGRELGE YGFHEYTEVK TVTVKISQKN S
Form	Liquid. In 50mM Tris-HCl buffer (pH7.5) containing 10% glycerol.
Purity	> 90% by SDS – PAGE.
Concentration	1 mg/ml (determined by Bradford assay).
Storage	Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.

GENE INFORMATION

Gene Name	ALDH1A1 aldehyde dehydrogenase 1 family, member A1 [Homo sapiens]
Synonyms	ALDH1A1; aldehyde dehydrogenase 1 family, member A1; ALDC; ALDH1; PUMB1; ALDH11; RALDH1; ALDH-E1; MGC2318; aldehyde dehydrogenase 1A1; ALDH class 1; retinal dehydrogenase 1; acetaldehyde dehydrogenase 1; retinaldehyde dehydrogenase 1; aldehyde dehydrogenase 1, soluble; aldehyde dehydrogenase, liver cytosolic
Gene ID	216
mRNA Refseq	NM_000689
Protein Refseq	NP_000680
MIM	100640
UniProt ID	P00352

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Chromosome Location	9q21.13
Pathway	Retinol metabolism; Biological oxidations
Function	Ras GTPase activator activity; aldehyde dehydrogenase (NAD) activity; androgen binding; oxidoreductase activity; retinal dehydrogenase activity

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