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Product datasheet for RC213720

ALDH1L1 (NM_012190) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ALDH1L1 (NM_012190) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ALDH1L1
Synonyms:	10-fTHF; 10-FTHFDH; FDH; FTHFD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC213720 representing NM_012190
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAAGATTGCAGTGATTGGACAGAGCCTGTTTGGCCAGGAAGTTTACTGCCACCTGAGGAAGGAGGGCC
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ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC213720 representing NM_012190
Red=Cloning site Green=Tags(s)

MKIAVIGQSLFGQEVYCHLRKEGHEVVGVFTVPDKDGKADPLGLEAEKDGVPVFKYSRWRAKGQALPDVV
AKYQALGAELNVLPFCSQFIPMEIISAPRHGSIIYHPSLLPRHRGASAINWTLIHGDKKGGFSIFWADDG
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GNDDKMLLVKNIQLEDGKMILASNFFKGAASSVLELTEAELVTAEAVRSFWQRILPKVLEVEDSTDFFKS
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SLVGQRLSDHPDVRKIGFTGSTEVGKHIMKSCAISNVKKVSLELGGKSPLIIFADCDLNKAVQMGMSSVF
FNKGENCIAAGRLFVEDSIHDEFVRRVVEEVRKMKVGNPLDRDTDHGPQNHHAHLVKLMEYCQHGVKEGA
TLVCGGNQVPRPGFFFEPTVFTDVEDHMFIAKEESFGPVMIISRFADGDLDAVLSRANATEFGLASGVFT
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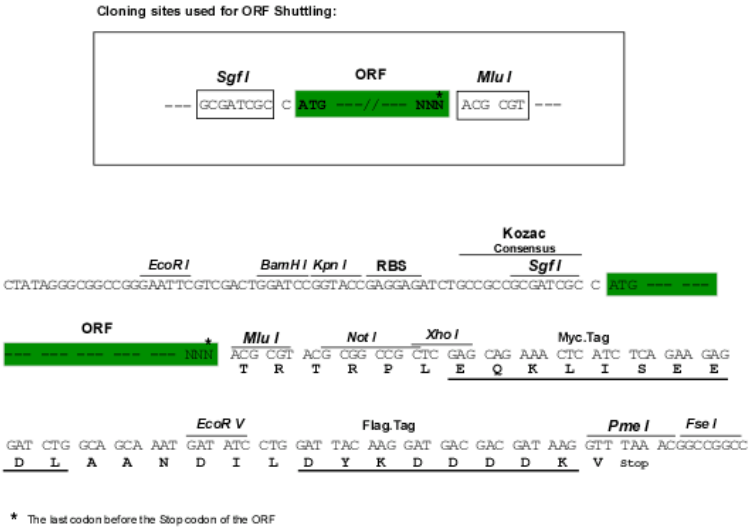
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6612_g01.zip

Restriction Sites: SgfI-MluI

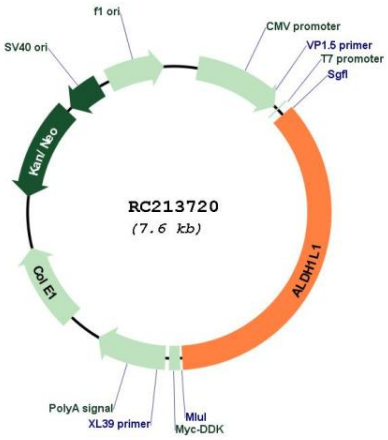
Cloning Scheme:



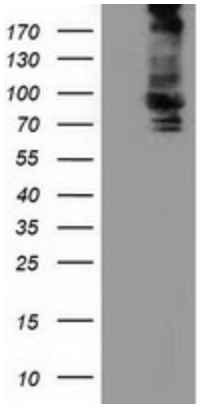
ACCN: NM_012190

ORF Size:	2706 bp
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	NM_012190.4
RefSeq Size:	3125 bp
RefSeq ORF:	2709 bp
Locus ID:	10840
UniProt ID:	O75891
Cytogenetics:	3q21.3
Domains:	aldedh, formyl_transf, formyl_trans_C
Protein Families:	Druggable Genome
Protein Pathways:	One carbon pool by folate
MW:	98.6 kDa
Gene Summary:	The protein encoded by this gene catalyzes the conversion of 10-formyltetrahydrofolate, nicotinamide adenine dinucleotide phosphate (NADP+), and water to tetrahydrofolate, NADPH, and carbon dioxide. The encoded protein belongs to the aldehyde dehydrogenase family. Loss of function or expression of this gene is associated with decreased apoptosis, increased cell motility, and cancer progression. There is an antisense transcript that overlaps on the opposite strand with this gene locus. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jun 2012]

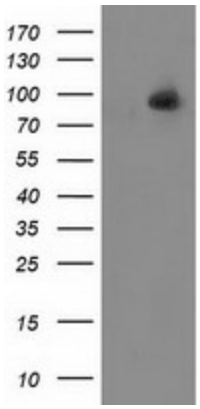
Product images:



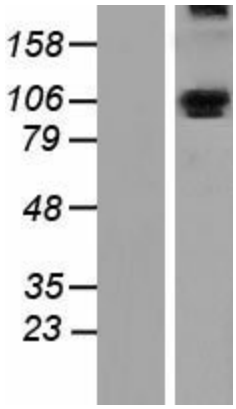
Circular map for RC213720



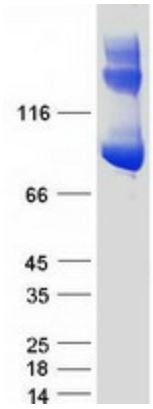
HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY ALDH1L1 (Cat# RC213720, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-ALDH1L1(Cat# [TA501851]). Positive lysates [LY415919] (100ug) and [LC415919] (20ug) can be purchased separately from OriGene.



HEK293T cells were transfected with the pCMV6-ENTRY control (Left lane) or pCMV6-ENTRY ALDH1L1 (RC213720, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-ALDH1L1 ([TA501869]). Positive lysates [LY415919] (100ug) and [LC415919] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY415919]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC213720 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ALDH1L1 protein (Cat# [TP313720]). The protein was produced from HEK293T cells transfected with ALDH1L1 cDNA clone (Cat# RC213720) using MegaTran 2.0 (Cat# [TT210002]).