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Product datasheet for RC223973

Retinol dehydrogenase 16 (RDH16) (NM_003708) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Retinol dehydrogenase 16 (RDH16) (NM_003708) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Retinol dehydrogenase 16
Synonyms:	hRDH-E; RODH-4; SDR9C8
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC223973 representing NM_003708 Red=Cloning site Blue=ORF Green=Tags(s) TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCC ATGTGGCTCTACCTGGCGGTTTTCGTGGGCCTGTACTACCTTCTGCACTGGTACCGGGAGAGGCAGGTGC TGAGCCACCTGAGAGATAAGTATGTGTTCATCACGGGCTGTGACTCTGGCTTCGGGAAACTGCTGGCCAG ACAGCTGGATGCACGAGGCTTGCGGGTGCTGGCTGCATGTCTGACGGAGAAAGGAGCCGAGCAGCTGAGG GGCCAGACTTCAGACAGGCTGGAGACGGTGACCCTGGATGTTACCAAGACAGAGAGCGTTGCTGCAGCCG CCCAGTGGGTGAAGGAGTGCGTGAGAGACAAAGGACTCTGGGGCCTGGTGAATAATGCTGGCATCTCCTT GCCCACGGCTCCCAATGAGTTGCTCACCAAGCAGGACTTGCTGACCATACTGGACGTGAACTTGTTGGGG GTGATTGATGTGACTCTGAACCTGCTGCCCTTAGTGAGGAGGGCCAGGGGCCGTGTGGTCAACGTCTTCA GTGTCATGGGCCGGGTGTCACTTTTTGGTGGAGGCTACTGCATCTCCAAGTATGGCGTGGAAGCCTTCTC TGACTCCCTCAGGAGGGAACTCTCCTACTTTGGGGTGAAGGTGGCTATGATTGAACCTGGCTATTTCAAG ACTGCTGTGACCAGTAAGGAGAGATTCTTAAAGAGCTTCCTGGAGATTTGGGACCGGTCCAGTCCAGAGG TCAAGGAGGCCTATGGCGAGAAGTTTGTTGCAGACTATAAGAAATCAGCTGAACAAATGGAGCAGAAGTG CACACAGGATCTGTCGTTGGTGACCAACTGCATGGAGCATGCGCTGATTGCCTGCCACCCCCGTACTCGC TACTCAGCTGGCTGGGATGCCAAGCTTCTCTACCTCCCCATGAGCTACATGCCCACCTTCCTGGTGGATG CCATTATGTACTGGGTCTCTCCAAGCCCGGCCAAGGCTCTA ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

>RC223973 representing NM_003708
Red=Cloning site Green=Tags(s)

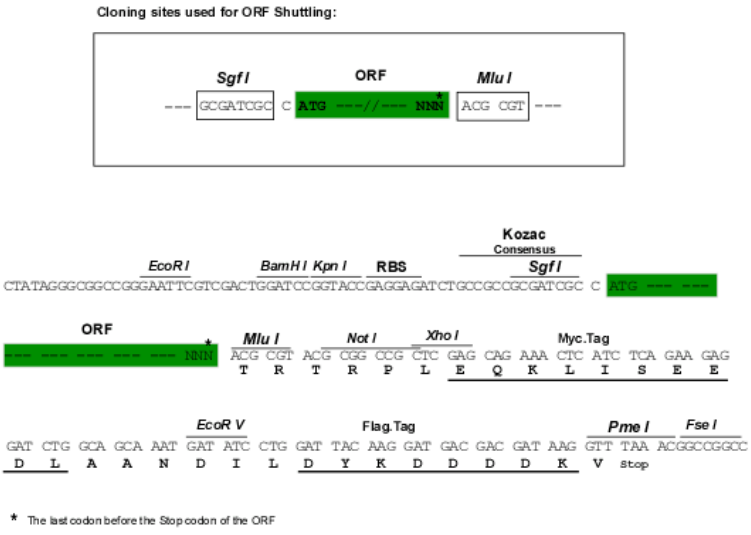
MWLYLAVFVGLYYLLHWYRERQVLSHLRDKYVFITGCDSGFGKLLARQLDARGLRVLAACLTEKGAEQLR
GQTSDRLETVTLDVTKTESVAAAAQWVKECVRDKGLWGLVNNAGISLPTAPNELLTKQDLLTILDVNLLG
VIDVTLNLLPLVRRARGRVVNVFSVMGRVSLFGGGYCISKYGVEAFSDSLRRELSYFGVKVAMIEPGYFK
TAVTSKERFLKSFLEIWDRSSPEVKEAYGEKFVADYKKSAEQMEQKCTQDLSLVTNCMEHALIACHPRTR
YSAGWDAKLLYLPMSYMPTFLVDAIMYWVSPSPAKAL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk8044_b09.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_003708

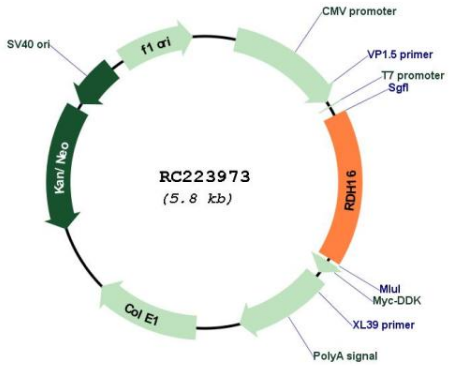
ORF Size: 951 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

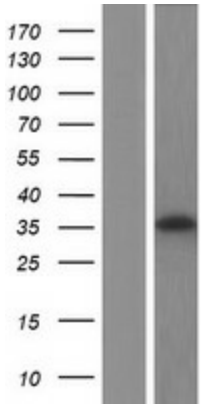
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in 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_003708.2, NP_003699.2
RefSeq Size:	2425 bp
RefSeq ORF:	954 bp
Locus ID:	8608
UniProt ID:	O75452
Cytogenetics:	12q13.3
Domains:	adh_short
Protein Pathways:	Metabolic pathways, Retinol metabolism
MW:	35.5 kDa
Gene Summary:	Oxidoreductase with a preference for NAD. Oxidizes all-trans-retinol, 9-cis-retinol, 11-cis-retinol and 13-cis-retinol to the corresponding aldehydes (PubMed:10329026, PubMed:12534290, PubMed:9677409). Has higher activity towards CRBP-bound retinol than with free retinol (PubMed:12534290). Oxidizes also 3-alpha-hydroxysteroids. Oxidizes androstanediol and androsterone to dihydrotestosterone and androstanedione. Can also catalyze the reverse reaction (PubMed:10329026, PubMed:9677409, PubMed:29541409). [UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RC223973



Western blot validation of overexpression lysate (Cat# [LY418488]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC223973 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).