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Product datasheet for RC210504

Alkaline Phosphatase (ALPP) (NM_001632) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Alkaline Phosphatase (ALPP) (NM_001632) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Alkaline Phosphatase
Synonyms:	ALP; ALPI; IAP; PALP; PLAP; PLAP-1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC210504 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCTGGGGCCCTGCATGCTGCTGCTGCTGCTGCTGGGCCTGAGGCTACAGCTCTCCCTGGGCATCA
TCCCAGTTGAGGAGGAGAACCCAGACTTCTGGAACCGCGAGGCAGCCGAGGCCCTGGGTGCCGCCAAGAA
GCTGCAGCCTGCACAGACAGCCGCCAAGAACCTCATCATCTTCCTGGGCGATGGGATGGGGGTGTCTACG
GTGACAGCTGCCAGGATCCTAAAAGGGCAGAAGAAGGACAAACTGGGGCCTGAGATACCCCTGGCCATGG
ACCGCTTCCCATATGTGGCTCTGTCCAAGACATACAATGTAGACAAACATGTGCCAGACAGTGGAGCCAC
AGCCACGGCCTACCTGTGCGGGGTCAAGGGCAACTTCCAGACCATTGGCTTGAGTGCAGCCGCCCGCTTT
AACCAGTGCAACACGACACGCGGCAACGAGGTCATCTCCGTGATGAATCGGGCCAAGAAAGCAGGGAAGT
CAGTGGGAGTGGTAACCACCACACGAGTGCAGCACGCCTCGCCAGCCGGCACCTACGCCCACACGGTGAA
CCGCAACTGGTACTCGGACGCCGACGTGCCTGCCTCCGCCCGCCAGGAGGGGTGCCAGGACATCGCTACG
CAGCTCATCTCCAACATGGACATTGACGTGATCCTAGGTGGAGGCCGAAAGTACATGTTTCGCATGGGAA
CCCCAGACCCTGAGTACCCAGATGACTACAGCCAAGGTGGGACCAGGCTGGACGGGAAGAATCTGGTGCA
GGAATGGCTGGCGAAGCGCCAGGGTGCCCGGTATGTGTGGAACCGCACTGAGCTCATGCAGGCTTCCCTG
GACCCGTCTGTGACCCATCTCATGGGTCTCTTTGAGCCTGGAGACATGAAATACGAGATCCACCGAGACT
CCACACTGGACCCCTCCCTGATGGAGATGACAGAGGCTGCCCTGCGCCTGCTGAGCAGGAACCCCCGCGG
CTTCTTCCTCTTCGTGGAGGGTGGTCGCATCGACCATGGTCATCATGAAAGCAGGGCTTACCGGGCACTG
ACTGAGACGATCATGTTCGACGACGCCATTGAGAGGGCGGGCCAGCTCACCAGCGAGGAGGACACGCTGA
GCCTCGTCACTGCCGACCACTCCCACGTCTTCTCCTTCGGAGGCTACCCCCTGCGAGGGAGCTCCATCTT
CGGGCTGGCCCCTGGCAAGGCCCGGGACAGGAAGGCCTACACGGTCCTCCTATACGGAAACGGTCCAGGC
TATGTGCTCAAGGACGGCGCCCGGCCGGATGTTACCGAGAGCGAGAGCGGGAGCCCCGAGTATCGGCAGC
AGTCAGCAGTGCCCCTGGACGAAGAGACCCACGCAGGCGAGGACGTGGCGGTGTTCGCGCGCGGCCCGCA
GGCGCACCTGGTTCACGGCGTGCAGGAGCAGACCTTCATAGCGCACGTCATGGCCTTCGCCGCCTGCCTG
GAGCCCTACACCGCCTGCGACCTGGCGCCCCCCGCCGGCACCACCGACGCCGCGCACCCGGGGCGGTCCG
TGGTCCCCGCGTTGCTTCCTCTGCTGGCCGGGACCCTGCTGCTGCTGGAGACGGCCACTGCTCCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC210504 protein sequence
Red=Cloning site Green=Tags(s)

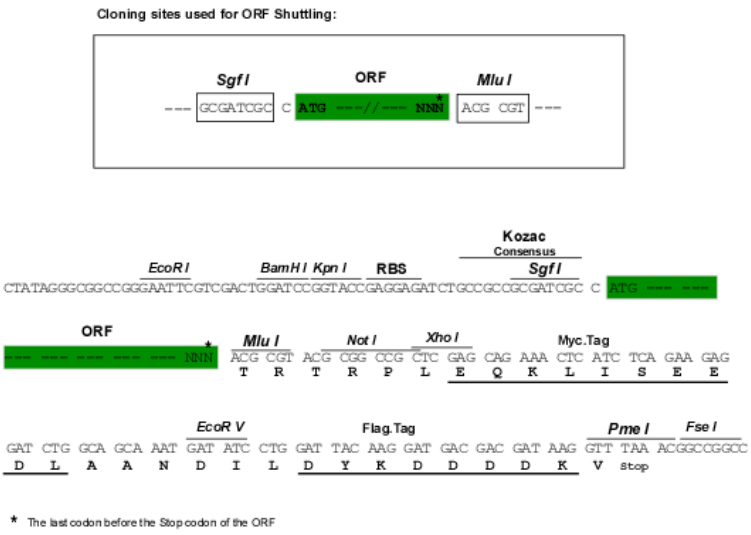
MLGPCMLLLLLLLGLRLQLSLGIIPVEEENPDFWNREAAEALGAAKKLQPAQTAAKNLIIFLGDGMGVST
VTAARILKGQKKDKLGPEIPLAMDRFPYVALSKTYNVDKHVPDSGATATAYLCGVKGNFQTIGLSAAARF
NQCNTTRGNEVISVMNRAKKAGKSVGVVTTTRVQHASPAGTYAHTVNRNWYSDADVPASARQEGCQDIAT
QLISNMDIDVILGGGRKYMFRMGTPDPEYPDDYSQGGTRLDGKNLVQEWLAKRQGARYVWNRTELMQASL
DPSVTHLMGLFEPGDMKYEIHRDSTLDPSLMEMTEAALRLLSRNPRGFFLFVEGGRIDHGHHESRAYRAL
TETIMFDDAIERAGQLTSEEDTLSLVTADHSHVFSFGGYPLRGSSIFGLAPGKARDRKAYTVLLYGNGPG
YVLKDGARPDVTESESGSPEYRQQSAVPLDEETHAGEDVAVFARGPQAHLVHGVQEQTFIAHVMAFAACL
EPYTACDLAPPAGTTDAAHPGRSVVPALLPLLAGTLLLLETATAP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6093_d05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001632

ORF Size: 1605 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: NM_001632.5

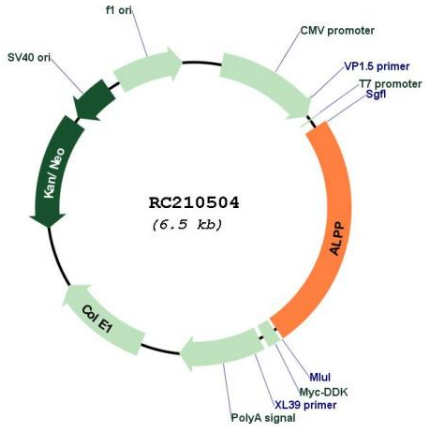
RefSeq Size: 2883 bp

RefSeq ORF: 1608 bp

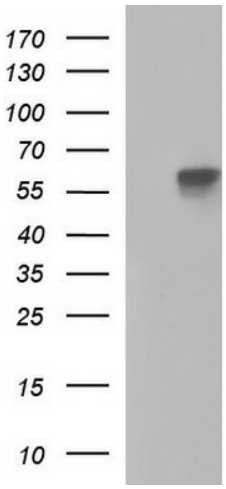
Locus ID: 250

UniProt ID:	P05187
Cytogenetics:	2q37.1
Domains:	alk_phosphatase
Protein Pathways:	Folate biosynthesis, Metabolic pathways
MW:	58 kDa
Gene Summary:	The protein encoded by this gene is an alkaline phosphatase, a metalloenzyme that catalyzes the hydrolysis of phosphoric acid monoesters. It belongs to a multigene family composed of four alkaline phosphatase isoenzymes. The enzyme functions as a homodimer and has a catalytic site containing one magnesium and two zinc ions, which are required for its enzymatic function. One of the main sources of this enzyme is the liver, and thus, it's one of several indicators of liver injury in different clinical conditions. In pregnant women, this protein is primarily expressed in placental and endometrial tissue, however, strong ectopic expression has been detected in ovarian adenocarcinoma, serous cystadenocarcinoma, and other ovarian cancer cells. [provided by RefSeq, Aug 2020]

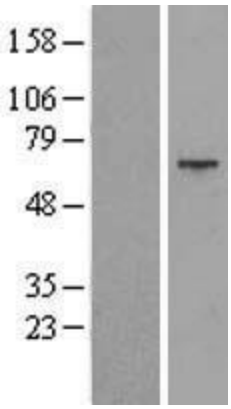
Product images:



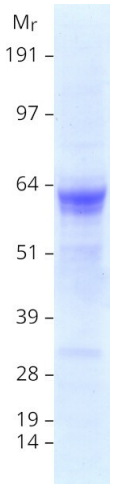
Circular map for RC210504



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY ALPP (Cat# RC210504, 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-ALPP(Cat# [TA506374]). Positive lysates [LY419831] (100ug) and [LC419831] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY419831]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210504 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ALPP protein (Cat# [TP310504]). The protein was produced from HEK293T cells transfected with ALPP cDNA clone (Cat# RC210504) using MegaTran 2.0 (Cat# [TT210002]).