

Product datasheet for **MR230373**

Alpl (NM_001287176) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Alpl (NM_001287176) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Alpl
Synonyms:	Akp-2; Akp2; APTNAP; TNAP; TNSALP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR230373 representing NM_001287176
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGATCTCACCATTTTTAGTACTGGCCATCGGCACCTGCCTTACCAACTCTTTTGTGCCAGAGAAGAGA
 GAGACCCAGTTACTGGCGACAGCAAGCCCAAGAGACCTTGAAAAATGCCCTGAAACTCCAAAAGCTCAA
 CACCAATGTAGCCAAGAATGTCATCATGTTCTCTGGGAGATGGTATGGCGCTCTCCACAGTAAACCGTGCC
 CGAATCCTTAAGGGCCAGCTACACCACAACACGGGCGAGGAGACCCGGCTGGAGATGGACAAATCCCTT
 TTGTGGCCCTCTCCAAGACATAAACACCAACGCTCAGGTCCTGACAGCGGGGACTGCCACTGCCTA
 CTTGTGTGGCGTGAAGGCCAACGAGGGCACAGTGGGAGTGAGCGCAGCCACAGAGCGCACGCGATGCAAC
 ACCACTCAGGGCAATGAGGTCACATCCATCCTGCGCTGGCCAAGGATGCTGGGAAGTCCGTGGCATTG
 TGACTACCACTCGGTGAACCACGCCACCCAGTGCAGCCTACGCACACTCGGCCGATCGGGACTGGTA
 CTCGGATAACGAGATGCCACCAGAGGCTCTGAGCCAGGGCTGCAAGGACATCGCATATCAGTAATGCAC
 AATATCAAGGATATCGAGTGATCATGGGTGGCGCCGGAATACATGTACCCGAAGAACAGAAGCTGATG
 TGAATACGAAGTGGATGAGAAGGCCAGGGGTACAAGGCTAGATGGCCTGGATCTCATCAGTATTTGGAA
 GAGCTTTAAACCCAGACACAAGCATTCCCACTATGTCTGGAACCGCACTGAACTGCTGGCCCTTGACCCC
 TCCAGGGTGGACTACCTCTTAGGTCTCTTTGAGCCCGGGGACATGCAGTATGAATTGAATCGGAACAACC
 TGACTGACCCCTTCGCTCTCCGAGATGGTGGAGGTGGCCCTCCGGATCCTGACCAAAAACCTCAAAGGCTT
 CTTCTTGCTGGTGAAGGAGGCAGGATTGACCACGGACATCATGAGGGTAAGGCCAAGCAGGCTCTGCAT
 GAAGCAGTGGAGATGGACCAGGCCATTGGCAAGCAGGCCCATGACATCCAGAAAGACACCTTGACTG
 TGGTACTGCTGATCATTCCACGTTTTACATTCGGTGGATACACCCCGGGGCAACTCCATCTTTGG
 TCTGGCTCCCATGGTGAGCGACACGGACAAGAAGCCCTTCACGGCCATCCTATATGGTAACGGGCCTGGC
 TACAAGGTGGTGGACGGTGAACGGGAAAATGTCTCCATGGTAGATTACGCTCACAACTACCAGGCC
 AGTCCGCTGTTCCCTGCGCCATGAGACCCACGGTGGAGAAGACGTGGCGGTCTTTGCCAAGGGCCCGAT
 GGCACACCTGCTTACGGCGTCCATGAGCAGAATACTACATCCCATGTGATGGCGTATGCCTCCTGCATT
 GGGGCCAACCTTGACCACTGTGCTGGCCGGCTCTGGGAGCGCACCCCTCCCAGGGGCCCTGCTGCTTC
 CACTGGCTGTGCTCTCCCTACGCACCCTGTTC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR230373 representing NM_001287176
 Red=Cloning site Green=Tags(s)

MISPFLVLAIGTCLTNSFVPEKERDPSYWRQQAQETLKNALKLQKLNNTNVAKNVIMFLGDGMGVSTVTAA
 RILKQQLHHNTGEETRLMDKFFVALSKTYNTNAQVPDSAGTATAYLCGVKANEGTVGVSAATERTRCN
 TTQGNEVTSILRWAKDAGKSVGIVTTTRVNHATPSAAYAHSADRDWYSDNEMPPEALSQGCKDIAYQLMH
 NIKDIDVIMGGGRKMYPKNRTDVEYELDEKARGTRLDGLDLISIWKSFKPRKHSHYVWNRTELLALDP
 SRVDYLLGLFEPGDMQYELNRNNTDPSLSEMVEVALRILTKNLKGFLLVEGGRIDHGHHEGKAKQALH
 EAVEMDQAIGKAGAMTSQKDTLTVVTADHSHVFTFGGYTPRGNSIFGLAPMVSDDTKKPFATILYGNPG
 YKVVDGERENVMVDYAHNNYQAQSAVPLRHETHGGEDVAVFAKGPMAHLLHGVHEQNYIPHMAYASCI
 GANLDHCAWAGSGSAPSPGALLLPLAVLSLRTLF

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



ACCN: NM_001287176

ORF Size: 1572 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_001287176.1](#), [NP_001274105.1](#)

RefSeq Size: 2672 bp

RefSeq ORF: 1575 bp

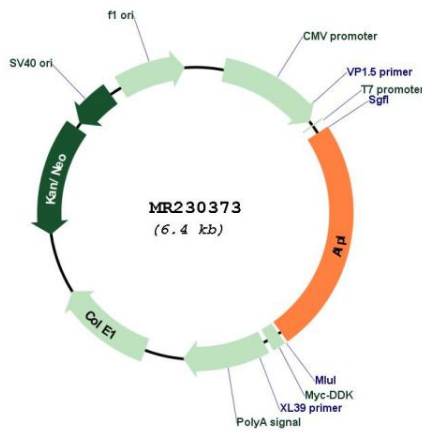
Locus ID: 11647

Cytogenetics: 4 70.02 cM

MW: 58 kDa

Gene Summary: This gene encodes a preproprotein that is proteolytically cleaved to yield a signal peptide and a proprotein that is subsequently processed to generate the active mature peptide. The encoded protein is a membrane-bound glycosylated enzyme that catalyzes the hydrolysis of phosphate esters at alkaline pH. The mature peptide maintains the ratio of inorganic phosphate to inorganic pyrophosphate required for bone mineralization. Mice that lack this enzyme show symptoms of osteomalacia, softening of the bones. In humans, mutations in this gene are associated with hypophosphatasia, an inherited metabolic bone disease in which deficiency of this enzyme inhibits bone mineralization leading to skeletal defects. Mutations in the mouse gene mirror the symptoms of human hypophosphatasia. A pseudogene of this gene is present on chromosome X. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Aug 2015]

Product images:



Circular map for MR230373