

## Product datasheet for **MG208392**

### **Alpl (NM\_007431) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Alpl (NM_007431) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Alpl
Synonyms:	Ak; Akp; Akp-2; Akp2; ALP; APTNAP; T; TNAP; TNSALP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG208392 representing NM\_007431  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGATCTCACCATTTTTAGTACTGGCCATCGGCACCTGCCTTACCAACTCTTTGTGCCAGAGAAGAGA  
 GAGACCCAGTTACTGGCGACAGCAAGCCCAAGAGACCTTGAAAAATGCCCTGAAACTCCAAAAGCTCAA  
 CACCAATGTAGCCAAGAATGTCATCATGTTCTGGGAGATGGTATGGGCGTCTCCACAGTAAACCGTGCC  
 CGAATCCTTAAGGGCCAGCTACACCACAACACGGGCGAGGAGACCCGGCTGGAGATGGACAAATCCCTT  
 TTGTGGCCCTCTCCAAGACATATAACACCAACGCTCAGGTCCTGACAGCGGGGACTGCCACTGCCTA  
 CTTGTGTGGCGTGAAGGCCAACGAGGGCACAGTGGGAGTGAGCGCAGCCACAGAGCGCACGCGATGCAAC  
 ACCACTCAGGGCAATGAGGTCACATCCATCCTGCGCTGGCCAAGGATGCTGGGAAGTCCGTGGCATTG  
 TGACTACCACTCGGTGAACCACGCCACCCAGTGCAGCCTACGCACACTCGGCCGATCGGGACTGGTA  
 CTCGGATAACGAGATGCCACCAGAGGCTCTGAGCCAGGGCTGCAAGGACATCGCATATCAGTAATGCAC  
 AATATCAAGGATATCGAGTGATCATGGGTGGCGCCGAAATACATGTACCCGAAGAACAGAAGCTGATG  
 TGGAAACGAAGTGGATGAGAAGGCCAGGGGTACAAGGCTAGATGGCCTGGATCTCATCAGTATTTGGAA  
 GAGCTTTAAACCCAGACACAAGCATTCCCACTATGTCTGGAACCGCACTGAACTGCTGGCCCTTGACCCC  
 TCCAGGGTGGACTACCTCTTAGGTCTCTTTGAGCCCGGGGACATGCAGTATGAATTGAATCGGAACAACC  
 TGACTGACCCCTTCGCTCTCCGAGATGGTGGAGGTGGCCCTCCGGATCCTGACCAAAAACCTCAAAGGCTT  
 CTTCTTGTGTGGAAGGAGGCAGGATTGACCACGGACATCATGAGGGTAAGGCCAAGCAGGCTCTGCAT  
 GAAGCAGTGGAGATGGACCAGGCCATTGGCAAGCAGGCCCATGACATCCAGAAAGACACCTTGACTG  
 TGGTACTGCTGATCATTCCACGTTTTACATTCGGTGGATACACCCCGGGGCAATCCATCTTTGG  
 TCTGGCTCCCATGGTGAGCGACACGGACAAGAAGCCCTTCACGGCCATCCTATATGGTAACGGGCTGGC  
 TACAAGGTGGTGGACGGTGAACGGGAAAATGTCTCCATGGTAGATTACGCTCACAACAACCTACCAGGCC  
 AGTCCGCTGTTCCCTGCGCCATGAGACCCACGGTGGAGAAGACGTGGCGGTCTTTGCCAAGGGCCCGAT  
 GGCACACCTGCTTACGGCGTCCATGAGCAGAATACTTCCCATGTGATGGCGTATGCCTCCTGCATT  
 GGGGCCAACCTTGACCACTGTGCTGGCCGGCTCTGGGAGCGCACCCCTCCCAGGGGCCCTGCTGCTTC  
 CACTGGCTGTGCTCTCCCTACGCACCCTGTTC

**ACGCGTACGCGGCCGCTCGAG** – GFP Tag – GTTTAA

**Protein Sequence:**

>MG208392 representing NM\_007431  
 Red=Cloning site Green=Tags(s)

MISPFLVLAIGTCLTNSFVPEKERDPSYWRQQAQETLKNALKLQKLNTNVAKNVIMFLGDGMGVSTVTAA  
 RILKQQLHHNTGEETRLMDKFPFVALSKTYNTNAQVPDSAGTATAYLCGVKANEGTVGVSAAATERTRCN  
 TTQGNVTSILRWAKDAGKSVGIVTTTRVNHATPSAAYAHSADRDWYSDNEMPPEALSQGCKDIAYQLMH  
 NIKDIDVIMGGGRKMYPKNRDVEYELDEKARGTRLDGLDLISIWKSFKPRKHSHYVWNRTELLALDP  
 SRVDYLLGLFEPGDMQYELNRNLTDPSSLSEMVEVALRILTKNLKGFLLVEGGRIDHGHHEGKAKQALH  
 EAVEMDQAIGKAGAMTSQKDTLTVVTADHSHVFTFGGYTPRGNSIFGLAPMVSDDTKKPFATILYNGPG  
 YKVVVDGERENSMVDYAHNNYQAQSAVPLRHETHGGEDVAVFAKGPMAHLLHGVHEQNYIPHVMAYASCI  
 GANLDHCAWAGSGSAPSPGALLLPLAVLSLRTLF

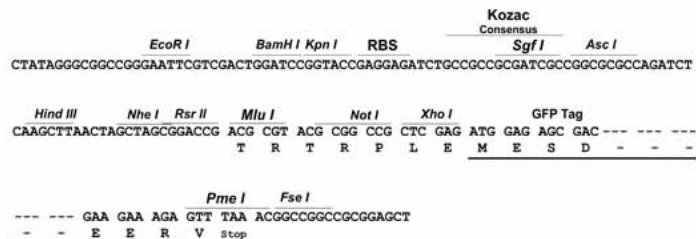
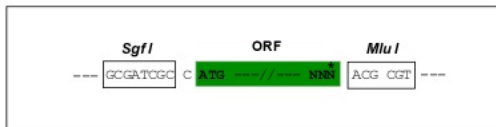
**TRTRPLE** – GFP Tag – V

**Restriction Sites:**

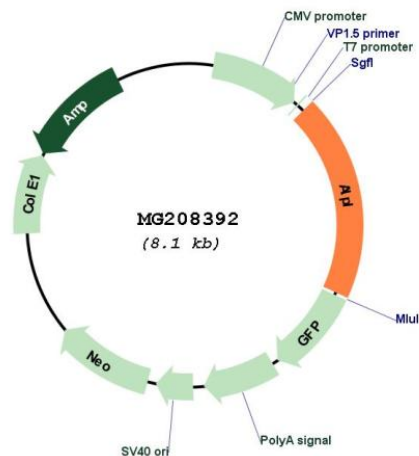
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



<b>ACCN:</b>	NM_007431
<b>ORF Size:</b>	1572 bp
<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_007431.3</a>
<b>RefSeq Size:</b>	2459 bp
<b>RefSeq ORF:</b>	1575 bp
<b>Locus ID:</b>	11647
<b>UniProt ID:</b>	<a href="#">P09242</a>
<b>Cytogenetics:</b>	4 70.02 cM
<b>Gene Summary:</b>	<p>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]</p>