

Product datasheet for **MG210175**

Appl1 (NM_145221) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Appl1 (NM_145221) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Appl1
Synonyms:	2900057D21Rik; 7330406P05Rik; AI585782; AW209077; BB022931; C88264; DIP13
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide
Sequence:**

>MG210175 representing NM_145221
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGCCGGGATCGACAAGCTGCCATTGAAGAGACCTGGAGGACAGTCCGCAGACAAGGCTTTACTTG
 GTGTATTTGAAGAAGATGCTACTGCTATTTCAAATTATATGAACCAATTGTATCAAGCTATGCATCGGAT
 TTATGATGCACAGAATGAATTGAGTGCAGCAACACACCTGACTTCGAAACTTTTGAAAGAATATGAAAA
 CAGCGTTTTCTTTGGGGGTGATGATGAAGTTATGAGCTCTACTTTGCAGCAGTTTTCCAAGGTCATAG
 ATGAGCTTAGTCTTGTGCATGCAGTACTTTCAACTCAACTTGTGATGCCATGATGTTCCCATTTCCCA
 GTTTAAAGAAAGAGATCTGAAAGAAATATTGACACTAAAGGAGGTATTTCAAATTGCTAGTAATGATCAT
 GATGCCGCAATTAATAGGTACAGTCGGTTGTCAAAAAAGAGAGAAATGACAAGGTAAAAATGAAGTTA
 CAGAGGATGTATATACTCCAGGAAAAACAACACCAGACCATGATGCATTATTTTGTGCACTAAATAC
 TCTTCAGTACAAGAAGAAATAGCTTTGTAGAACCTCTACTGGGATACATGCAGGCTCAGATAAGTTTC
 TTTAAGATGGGTTCTGAAATCTCAATGGACAACCTGGAAGAATTCTAGCTAACATTGGAACAAGTGATAC
 AGAATGTTTCAAGAGAAATGGATGGTGTAGAGACCATGCAGCAGACAATAGAAGACTTGGAGGTAGC
 CAGTGACCCTTTATATCTGCCTGACCCGGATCCCAACAGTTTCCCATCAATCGAAATTTAACCCGAAAG
 GCTGGATACCTAAATGCTAGGAATAAAACAGGCTTGGTGTCTACCTGGGATAGACAGTTTTACTTCA
 CGCAGGGTGGAACCTTAATGAGTCAAGCCCGTGGAGATGTGGCAGGAGGCTAGCCATGGACATAGACAA
 CTGTTCACTGATGGCTGTGGACTGTGAAGACAGACGATACTGTTTTAGATCACTTCTTTTGTGAAAA
 AAATCTTCAATATTGCAAGCAGAGAGTAAAAAGACCATGAAGAGTGGATCTGTACAATAACAACATAT
 CTAACAAATATATTTGAGTGAAATCCAGAGGAACTGCTGCACGAGTGAATCAGTCTGCTCTAGAAGC
 TGTCACTCCTTCCCATCTTTCCAGCAGAGACACGAGAGCCTGCGTCCAGGAGGACAATCTCGGCCACCA
 ACAGCTCGAACCAGCAGTTCAGGATCCTTGGGATCAGAGTCTACAAATTTGGCTGCCCTCTCTAGATT
 CTCTTGTGCTCCGATACCAATACAGTTTGATATAATTTCTCTGTGTGTAAGATCAGCCTGGCCA
 GGCAAAAGCCTTTGGTCAAGGAGGCAGGCGTACAAATCCATTTGGAGAATCTGGAGGAAGCACAAATCA
 GAAACAGAAGACTCTATTCTTCATCAGTTATTTATGTCGATTCTTGGTTCTATGGAGGTAAAGTCAG
 ATGACCATCCAGATGTTGTCTATGAAACAATGCACCAGATCTTAGCTGCTCGGGCCATCCACAACATCTT
 TCGTATGACAGAATCACATTTATTAGTCACTTGTGACTGCTTGAAGTTAATTGATCCGCAGACCCAAGTT
 ACAAGGCTCACATTTCCATTGCCGTGTGTAGTTCTGTATGCTACGCACCAGGAAAATAACGACTTTTTG
 GATTTGTTCTCCGACATCAGGCGGAAGAAGTGAGAGTAATTTGTATCAGTCTGCTATATATTTGAATC
 AAACAATGAGGGAGAAAAGATTTGTGATTCTGTTGGACTGGCAAAACAGATAGCTTTGCATGCTGAAGT
 GATCGTAGGGCATCAGAAAAACAAAAGAAATAGAGAGAGTAAAAGAGAAACAGCAGAAAGAGCTCAGCA
 AACAGAAACAGATTGAGAAGGACTTGAAGAACAGAGTCGGTTGATAGCTGCCTCCAGTAGACCAACCA
 GGCTGGTAGTGAGGGCCAGCTTGTCTTAGCAGTAGCCAATCAGAGGAGAGTGATTTGGGAGAAGAAGGG
 AAAAAAGAGAGTCGGAAGCA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG210175 representing NM_145221
Red=Cloning site Green=Tags(s)

MPGIDKLPHEETLEDSPQTRSLGVFEEDATAISNYMNQLYQAMHRIYDAQNELSAATHLTSKLLKEYEK
QRFPLGGDDEMSSTLQQFSKVIDELSSCHAVLSTQLADAMFPISQKERDLKEILTLKEVFQIASNDH
DAAINRYSRLSKKRENDKVKEYEVEDVYTSRKQHQTMHMYFCALNTLQYKKKIALLEPLLGYMQAQISF
FKMGSENNGQLEEFANIGTSVQNVREMDGDVETMQQTIEDLEVASDPLYLPDPDTKFPINRNLTRK
AGYLNARNKTGLVSSTWDRQFYFTQGGNLSQARGDVAGGLAMDIDNCSVMAVDCEDRRYCFQITSFDGK
KSSILQAESKKDHEEWICTINNISKQIYLSNPETAARVNQSALEAVTPSPSFQQRHESLRPGGQSRPP
TARTSSSGSLGSESTNLAALSLDSLVPDTPIQFDIISPVCEDQPGQAKAFGQGGRRTNPFGESGGSTKS
ETEDSILHQLFIVRFLGSMEVKSDDHPDVVYETMRQILAAIAIHNI FRMTESHLVTCCLKLIDPQTQV
TRLTFPLPCVVL YATHQENKRLFGFVLR TSGGRSENLSSVCYIFESNNEGEKICDSVGLAKQIALHAEL
DRRASEKQKEIERVKEKQKELSKQKQIEKDLEEQSRLIAASSRPNQAGSEGLVSSSQSEESDLGEEG
KKRESEA

TRTRPLE – GFP Tag – V

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM_145221

ORF Size: 2121 bp

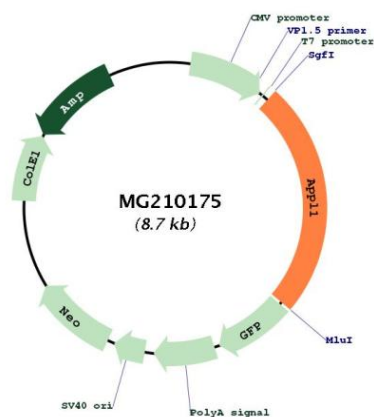
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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:	<u>NM_145221.2, NP_660256.1</u>
RefSeq Size:	6961 bp
RefSeq ORF:	2124 bp
Locus ID:	72993
UniProt ID:	<u>Q8K3H0</u>
Cytogenetics:	14 A3
Gene Summary:	Multifunctional adapter protein that binds to various membrane receptors, nuclear factors and signaling proteins to regulate many processes, such as cell proliferation, immune response, endosomal trafficking and cell metabolism (By similarity) (PubMed:25328665, PubMed:25568335, PubMed:27219021). Regulates signaling pathway leading to cell proliferation through interaction with RAB5A and subunits of the NuRD/MeCP1 complex (By similarity). Functions as a positive regulator of innate immune response via activation of AKT1 signaling pathway by forming a complex with APPL1 and PIK3R1 (PubMed:25328665). Inhibits Fc-gamma receptor-mediated phagocytosis through PI3K/Akt signaling in macrophages (PubMed:25568335). Regulates TLR4 signaling in activated macrophages (PubMed:27219021). Involved in trafficking of the TGFBR1 from the endosomes to the nucleus via microtubules in a TRAF6-dependent manner. Plays a role in cell metabolism by regulating adiponectin and insulin signaling pathways (By similarity). Required for fibroblast migration through HGF cell signaling (PubMed:26445298). Positive regulator of beta-catenin/TCF-dependent transcription through direct interaction with RUVBL2/reptin resulting in the relief of RUVBL2-mediated repression of beta-catenin/TCF target genes by modulating the interactions within the beta-catenin-reptin-HDAC complex (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MG210175