OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for MG211254

Ap2a2 (NM_007459) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ap2a2 (NM_007459) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Ap2a2
Synonyms:	2410074K14Rik; Adtab; AF006990; AW146353; C78001; L25
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

View online »

ORF Nucleotide Sequence:

>MG211254 representing NM_007459
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCCGGCCGTATCCAAGGGGGACGGGATGCGAGGCCTAGCGGTCTTCATCTCCGACATCCGCAACTGTA
AAAGTAAAGAAGCTGAAATAAAGAGAATAAACAAAGAACTGGCAAATATTAGATCCAAATTTAAAGGTGA
CAACGCTCTTGATGGCTACAGTAAAAAGAAGTATGTCTGCAAATTGCTCTTCATCTTTCTCCTTGGTCAT
GACATTGACTTTGGACACATGGAAGCTGTGAATCTTCTGAGCTCAAACAGATACACGGAAAAGCAGATTG
GCTACCTTTTCATCTCTGTATTGGTGAACTCGAATAGTGAACTGATCCGGTTGATTAACAATGCCATCAA
GAATGACCTGGCCAGCCGCAATCCTACGTTTATGGGTCTCGCCCTGCACTGCATTGCCAATGTGGGTAGC
CGTGAGATGGCGGAGGCCTTCGCCGGAGAGATCCCCAAGATCCTCGTGGCAGGAGATACCATGGATAGTG
TGAAGCAGAGCGCAGCCCTGTGCTTGTTACGCCTGTACAGGACATCACCTGACCTAGTTCCCATGGGCGA
CTGGACATCTCGTGTGGTACACCTCCTCAATGACCAGCACTTGGGGGTAGTGACTGCAGCGACTAGCCTC
ATCACCACCCTGGCCCAGAAGAACCCTGAGGAGTTCAAGACCTCTGTCTCGCTAGCTGTCTCGCGACTGA
GCAGGATTGTGACGTCTGCATCAACAGATCTTCAGGATTATACTTACTACTTTGTCCCGGCTCCTTGGCT
GTCAGTCAAGCTTCTGAGACTGCTGCAGTGCTACCCACCCCCAGACCCTGCGGTGCGTGGCCGCCTGACT
GAGTGCTTGGAGACCATCCTGAACAAGGCCCAGGAGCCACCCAAGTCCAAGAAGGTCCAGCATTCAAATG
CCAAGAACGCTGTGCTGTTTGAGGCCATCAGCCTGATCATCCACCATGACAGTGAGCCAAACTTGCTCGT
CCGCGCCTGCAACCAGCTGGGCCAGTTCCTGCAGCACCGGGAGACGAACCTACGCTACCTGGCTCTGGAG
AGCATGTGCACGCTGGCCAGCTCTGAGTTCTCCCACGAGGCCGTCAAGACCCACATTGAGACGGTCATCA
ATGCCTTGAAGACGGAAAGAGACGTGAGTGTGAGGCAGCGGGCAGTGGACCTGCTCTACGCCATGTGTGA
CCGGAGCAACGCCCAGCAGATTGTGGCTGAGATGCTGAGCTACCTAGAAACGGCTGACTACTCCATCCGA
GAGGAAATTGTGCTGAAGGTGGCCATCCTGGCTGAGAAGTATGCAGTGGACTACACTTGGTATGTGGACA
CCATCCTCAACCTCATCCGCATCGCGGGCGACTATGTGAGCGAGGAGGTGTGGTACCGCGTCATCCAGAT
TGTCATCAATCGCGATGATGTGCAGGGCTATGCTGCCAAGACGGTATTTGAGGCATTGCAGGCGCCAGCA
TGTCATGAGAACTTGGTCAAAGTGGGCGGCTACATCCTGGGGGAGTTTGGAAACTTGATAGCTGGGGACC
CACGATCCAGCCCTCTGATCCAGTTCAACCTGCTCCACTCCAAGTTCCACTTGTGCAGCGTCCCCACTCG
GGCACTCCTGCTGTCCACCTACATCAAGTTCGTGAACCTCTTTCCAGAGGTAAAAGCTACCATTCAGGAC
GTGCTGCGCAGTGACAGCCAGCTGAAGAATGCCGACGTGGAGCTGCAGCAGCGGGCTGTGGAGTACCTGC
GACTGAGCACTGTCGCCAGCACTGACATCCTGGCAACTGTCCTGGAGGAAATGCCACCCTTCCCTGAGCG
TGAGTCCTCCATCTTGGCCAAGCTGAAGAAGAAGAAGGGCCCAAGCACAGTGACTGACCTGGAGGAGACC
AAGCGGGAGCGAAGCATCGATGTGAATGGGGGCCCTGAACCCGTTCCAGCCAGCACCAGTGCTGCGTCCA
CACCTTCTCCGTCAGCAGACCTGCTGGGTCTGGGGGCCGTGCCCCCTGCTCCCACGGGGCCCCCTCCCTC
CTCTGGCGGCGGGCTGCTGGTGGACGTGTTCTCAGACTCAGCTTCTGCAGTCGCACCTCTTGCACCCGGC
TCTGAAGACAACTTTGCCAGGTTTGTTTGTAAAAATAATGGTGTATTGTTCGAAAACCAGCTGCTTCAAA
TTGGACTTAAGTCAGAATTTCGGCAGAATTTAGGCCGAATGTTCATATTTTATGGTAACAAGACCTCCAC
GCAGTTCCTAAACTTCACTCCAACACTAATCTGTGCTGACGACCTTCAAACTAATCTGAACCTGCAGACT
AAGCCCGTGGACCCAACTGTGGATGGGGGCGCACAGGTGCAACAAGTGGTCAACATTGAGTGTATATCTG
ATTTCACAGAGGCACCTGTCCTCAACATCCAGTTCAGGTATGGTGGGACCTTCCAGAATGTGTCTGTTAA
GCTTCCCATCACTCTCAACAAATTTTTCCAGCCCACAGAAATGGCTTCTCAGGATTTCTTTCAACGTTGG
AAGCAGTTGAGCAATCCACAGCAAGAAGTGCAGAATATCTTCAAAGCAAAGCATCCGATGGACACAGAGA
TCACTAAGGCAAAGATTATTGGATTTGGTTCTGCGCTCCTGGAAGAAGTTGACCCGAATCCTGCAAATTT
CGTGGGTGCTGGCATAATACACACCAAAACCACCCAGATTGGCTGCTTGTTGCGCCTGGAGCCAAACCTG
CAAGCTCAGATGTATAGACTCACCTTGCGTACCAGCAAAGACACCGTCTCTCAGAGACTATGTGAATTGC
TGTCGGAACAGTTC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

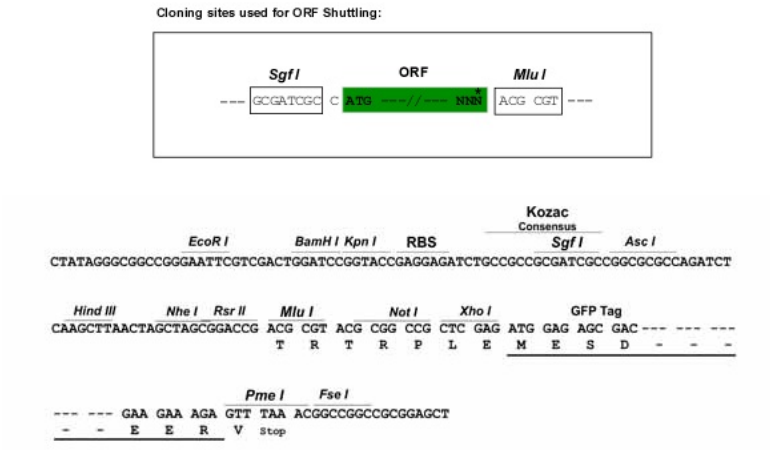
>MG211254 representing NM_007459
Red=Cloning site Green=Tags(s)

MPAVSKGDGMRGLAVFISDIRNCKSKEAEIKRINKELANIRSKFKGDNALDGYSKKKYVCKLLFIFLLGH
DIDFGHMEAVNLLSSNRYTEKQIGYLFISVLVNSNSELIRLINNAIKNDLASRNPTFMGLALHCIANVGS
REMAEAFAGEIPKILVAGDTMDSVKQSAALCLLRLYRTSPDLVPMGDWTSRVVHLLNDQHLGVVTAATSL
ITTLAQKNPEEFKTSVSLAVSRLSRIVTSASTDLQDYTYYFVPAPWLSVKLLRLLQCYPPPDPAVRGRLT
ECLETILNKAQEPPKSKKVQHSNAKNAVLFEAISLIIHHDSEPNLLVRACNQLGQFLQHRETNLRYLALE
SMCTLASSEFSHEAVKTHIETVINALKTERDVSVRQRAVDLLYAMCDRSNAQQIVAEMLSYLETADYSIR
EEIVLKVAILAEKYAVDYTWYVDTILNLIRIAGDYVSEEVWYRVIQIVINRDDVQGYAAKTVFEALQAPA
CHENLVKVGGYILGEFGNLIAGDPRSSPLIQFNLLHSKFHLCSVPTRALLLSTYIKFVNLFPEVKATIQD
VLRSDSQLKNADVELQQRAVEYLRLSTVASTDILATVLEEMPPFPERESSILAKLKKKKGPSTVTDLEET
KRERSIDVNGGPEPVPASTSAASTPSPSADLLGLGAVPPAPTGPPPSSGGGLLVDVFSDSASAVAPLAPG
SEDNFARFVCKNNGVLFENQLLQIGLKSEFRQNLGRMFIFYGNKTSTQFLNFTPTLICADDLQTNLNLQT
KPVDPTVDGGAQVQQVVNIECISDFTEAPVLNIQFRYGGTFQNVSVKLPITLNKFFQPTEMASQDFFQRW
KQLSNPQQEVQNIFKAKHPMDTEITKAKIIGFGSALLEEVDPNPANFVGAGIIHTKTTQIGCLLRLEPNL
QAQMYRLTLRTSKDTVSQRLCELLSEQF

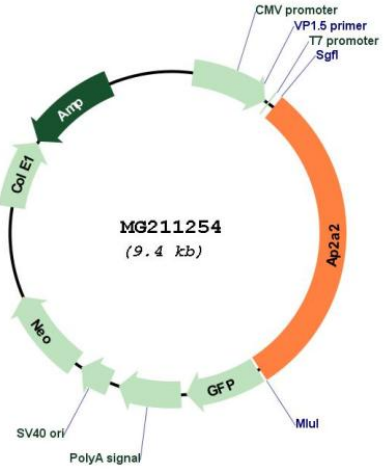
TRTRPLE – GFP Tag – V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN:	NM_007459
ORF Size:	2814 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_007459.2, NP_031485.2
RefSeq Size:	4639 bp
RefSeq ORF:	2817 bp
Locus ID:	11772
UniProt ID:	P17427
Cytogenetics:	7 F5

Gene Summary: Component of the adaptor protein complex 2 (AP-2). Adaptor protein complexes function in protein transport via transport vesicles in different membrane traffic pathways. Adaptor protein complexes are vesicle coat components and appear to be involved in cargo selection and vesicle formation. AP-2 is involved in clathrin-dependent endocytosis in which cargo proteins are incorporated into vesicles surrounded by clathrin (clathrin-coated vesicles, CCVs) which are destined for fusion with the early endosome. The clathrin lattice serves as a mechanical scaffold but is itself unable to bind directly to membrane components. Clathrin-associated adaptor protein (AP) complexes which can bind directly to both the clathrin lattice and to the lipid and protein components of membranes are considered to be the major clathrin adaptors contributing the CCV formation. AP-2 also serves as a cargo receptor to selectively sort the membrane proteins involved in receptor-mediated endocytosis. AP-2 seems to play a role in the recycling of synaptic vesicle membranes from the presynaptic surface. AP-2 recognizes Y-X-X-[FILMV] (Y-X-X-Phi) and [ED]-X-X-X-L-[LI] endocytosis signal motifs within the cytosolic tails of transmembrane cargo molecules. AP-2 may also play a role in maintaining normal post-endocytic trafficking through the ARF6-regulated, non-clathrin pathway. The AP-2 alpha subunit binds polyphosphoinositide-containing lipids, positioning AP-2 on the membrane. The AP-2 alpha subunit acts via its C-terminal appendage domain as a scaffolding platform for endocytic accessory proteins. The AP-2 alpha and AP-2 sigma subunits are thought to contribute to the recognition of the [ED]-X-X-X-L-[LI] motif. [UniProtKB/Swiss-Prot Function]