

## Product datasheet for **MG212422**

### **Aak1 (NM\_177762) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Aak1 (NM_177762) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Aak1
Synonyms:	5530400K14Rik; 9630042K20; AU067724; AU067726; BC028270; C79663; D6Ertd245e; mKIAA1048; R75501
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG212422 representing NM\_177762  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAAGAAGTTTTTCGACTCCAGGCGGGAGCAGGGGAGCTCTGGCCTGGGTTTCAGGCTCCAGCGGAGGAG  
 GGGCAGCAGCTCAGGCCTGGGCAGTGGTTACATCGGAAGGGTCTTCGGCATCGGGAGGCAGCAGGTCAC  
 CGTGGACGAGGTGTTGGCGGAAGGTGGATTTCGCTCTTGTCTTTCTGGTGAGAACAAGCAATGGGGTGAAA  
 TGTGCCTTGAAACGATGTTTGTCAACAATGAACATGACCTCCAGGTGTGCAAGAGGGAGATCCAGATCA  
 TGAGAGACCTATCAGGGCACAAGAACATTGTGGGCTACATTGATTCTAGTATCAACAATGTGAGCAGCGG  
 CGACGCTGGGAAGTTCTCATTCTCATGGACTTCTGCAGAGGAGGCCAGGTGGTAAACCTGATGAACCG  
 CGTCTCCAGACAGGCTTACAGAGAATGAAGTGTGCAGATATTCTGTGACACCTGTGAAGCTGTGGCCC  
 GCCTGCATCAGTGCAAACTCCCATTATCCACCGGGACCTGAAGGTTGAAAATATCTCTTGCATGACCG  
 AGGCCACTATGTCTTGTGTGACTTTGGAAGTGCCACCAACAAATCCAGAATCCACAGGCCGAGGGAGTC  
 AATGCAGTAGAAGATGAGATTAAGAAATACACAACGCTCTCCTATCGAGCCCCAGAAATGGTCAACTTGT  
 ACAGTGGCAAAATCATCACTACGAAGGCAGATATTTGGGCTCTAGGCTGTTTGTGTATAAATTATGCTA  
 CTTCACTTTGCCGTTTGGGGAGAGCCAGGTGGCGATTTGTGACGGAAGCTTACAAATTCCTGATAACTCT  
 CGTTATTTCTAAGATATGCACTGCCTTATTAGGTATATGTTGGAACCAGACCCCTGACAAAAGGCCGATA  
 TTTACCAGGTTTCATACTTCTCATTAAACTACTCAAGAAAGAATGCCCGTTCCAAATGTACAGAACTC  
 TCCATTCTGCAAACTTCTGAACAGTGAAAGCCAGTGAAGCAGCTGTGAAAAGACCCAGCCAAAG  
 GCCAGACTGACCGATCCCATTCCACCACAGAGACTTCAATCGCACCCCGCCAGAGGCCCTAAAGCTGGGC  
 AGACTCAGCCAAACCCAGGCATCCTTCCCATCCAGCCAGCCCTGACTCCTCGGAAGAGGGCCACTGTTCA  
 GCCCTACCTCAGGCTGCAGGACCCAGCAATCAGCCTGGACTTCTACCCAGTGTTTCCCAACCTAAAGCC  
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 AGACACCTGCTACCCAGACACAAGGTTTGGCCACCCAGGCCAGGCCACTCCCCAGCACCAGCAGCAACA  
 CCTCCTCAAGCAACAGCAGCAACAGCAGCAACAGCCTCAGCAGCCTACAGCACCACCACAGCCTGCAGGC  
 ACCTTTTACCAGCAGCAGCAACAGCAGCAGCAGCAGGCTCAGACTCAGCAGCAGATTCAAGCCCCAG  
 TGAGACAACAGCCAAAAGTTCAGACCACTCCACCTCAACCATCCAGGGACAGAAAGTTGGATCTCTCAC  
 TCCTCCATCATCACCAAAACCAACGTGCTGGGCACAGACGGATTCTCAGTGATGTAACCCACAGTGCA  
 GTCTTTGGGGTCTGCCAGCAAATCAACCCAGCTGCTCCAGGCAGCTGCAGCTGAGGCCAGTCTCAATA  
 AATCTAAGTCTGCAACCACCACTCCCTCAGGCTCTCCACGGACTTACAGCAGAAATGTCTCCAATGCTTC  
 AGAAGGCTCCACATGGAATCCTTTTGTGACGACAACCTCTCAAACCTCACAGCTGAAGAGCTGCTAAAC  
 AAGGACTTTGCCAAGCTTGGGAAGGAAAGCTGCCTGAGAAGCTTGGTGGCTCTGCAGAGAGTTTGTACC  
 CAGGCTTCCAGCCAACACAAGGAGATGCCTTACCACCTCCTTTTCTGCTGGAAGTCTGAAAAAAG  
 GAAGGGGGGCCAGGCTGTGGACTCTGGCATCCCCTTCTAAGTGTGTCTGATCCCTTCATTCTCTTCAA  
 GTACCTGATGCTCCAGAAAACTAATCGAGGGACTCAAATCTCCTGACACTTCTCTTCTGCTCCCTGACC  
 TCTTGCCTATGACAGATCCTTTTGGCAGCACTTCTGATGCTGTTATTGACAAAGCTGATGTTGCTGTTGA  
 GAGTCTCATACCTGGACTGGAGCCACCTGTTGCTCAGCGCCTCCCATCTCAAACGGAATCTGTGACCTCG  
 AACCGCACAGACTCTCTACGGGGGAAGACTCTCTGCTTGACTGCTCTCTGCTTTCTAACCTACTGCTG  
 GCCTTCTGGAGGAGTTTGGCCCCATAGCACTCTCTGCTCCCACTCATAAAGCTGCAGAAGATAGCAATCT  
 CATCTCAGGTTTTTGGTGTGCTGAGGGCTCCGAAAAGGTGGCAGAAGATGAGTTTGACCCTATTCCTGTA  
 CTAATTACCAAAAACACACAAGGTGGGCACTCTAGGAACAGCAGTGGGAGCTCTGAGTCCAGTCTTCCCA  
 ACCTAGCCAGGTCTTGTGCTGGTGGATCAGCTCATAGACCTG

**ACGCGT**ACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence: >MG212422 representing NM\_177762  
 Red=Cloning site Green=Tags(s)

MKKFFDSRREQSSGLGSGSSGGGSSSGLGSGYIGRVFGIGRQQVTVDEVLAEGGFALVFLVRTSNGVK  
 CALKRMFVNNEHDLQVCKREIQIMRDL SGHKNI VGYIDSSINNVS SGDVWEVLILMDFCRGGQVVNLMNQ  
 RLQTGF TENEVLQIFCDTCEAVARLHQCKTPIIHRDLKVENILLHDRGHYVLCDFGSATNKFQNPQAEQV  
 NAVEDEIKKYTTLSYRAPEMVNLVSGKIIITTKADIWALGCLLYKLCYFTLPPFGESQVAICDGSFTIPDNS  
 RYSQDMHCLIRYMLEPDPDKRPDIYQVSYFSFKLLKKECPVNVQNSPIPAKLPEPVKASEAAVKKTKPK  
 ARLTDP IPTTETSIAPRQRPKAGQTQPNPILP IQPAL TPRKRATVQPLPQAAGPSNQPLLPSVSQPKA  
 QATPSQPLQSSQPKQPQAPPTPQQTPATQTQGLPTQAQATPQHQQHLLKQQQQQQPQPPTAPPQAG  
 TFYQQQQQQQAQTQQQIQAPVYRQPKVQTTTPPTIQGQKVGSLTPPSSPKTQRAGHRRILSDVTHSA  
 VFGVPASKSTQLLQAAAAEASLNKSKSATTTSPGSPRTSQQNVSNASEGSTWNPFDNDFSKLTAELLN  
 KDFAKLGEGKLEKLGSAESLIPGFQPTQGDAFTTSPFSAGTAEKRKGGQAVDSGIPLLSVSDPFIPLQ  
 VPDAPKLEIEGLKSPDTSLLLPLDLPMTDPFGSTSDAVIDKADVAVESLIPGLEPPVAQRLPSQTESVTS  
 NRTDSL TGEDSLLDCLLSNPTAGLLEEFAPIALSAPTHKAAEDSNLISGFGVAEGSEKVAEDEFDPIPV  
 LITKNTQGGHSRNSGSSSESSLPNLARLLLLVDQLIDL

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

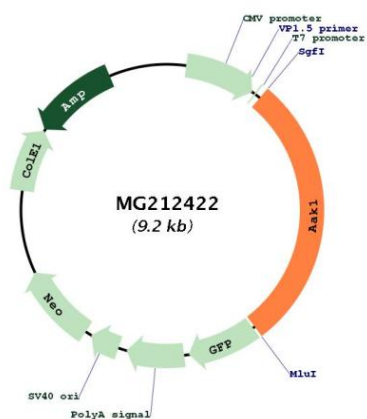
Cloning Scheme:



ACCN: NM\_177762

<b>ORF Size:</b>	2634 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_177762.7</a>
<b>RefSeq Size:</b>	19120 bp
<b>RefSeq ORF:</b>	2637 bp
<b>Locus ID:</b>	269774
<b>UniProt ID:</b>	<a href="#">Q3UHJ0</a>
<b>Cytogenetics:</b>	6 37.75 cM
<b>Gene Summary:</b>	Regulates clathrin-mediated endocytosis by phosphorylating the AP2M1/mu2 subunit of the adaptor protein complex 2 (AP-2) which ensures high affinity binding of AP-2 to cargo membrane proteins during the initial stages of endocytosis. Isoform 1 and isoform 2 display similar levels of kinase activity towards AP2M1. Regulates phosphorylation of other AP-2 subunits as well as AP-2 localization and AP-2-mediated internalization of ligand complexes. Phosphorylates NUMB and regulates its cellular localization, promoting NUMB localization to endosomes. Binds to and stabilizes the activated form of NOTCH1, increases its localization in endosomes and regulates its transcriptional activity (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MG212422