

Product datasheet for **MR206703**

Agk (NM_023538) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Agk (NM_023538) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Agk
Synonyms:	2610037M15Rik; 6720408I04Rik; A1465370; Mulk
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR206703 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGACTGCATTCTTTAAACGCTTCGAAATCATTGGAAGAAAACACAGCTGGGCTCTGTTTGTGACAT
 GGGGAGGTCAGTGGCTCTACGGGAAGCACTGTGATAACCTGCTAAGAAGAGCAGCCTGTCAAGAAGCTCA
 GGTGTTTGGCAACCAGCTCATTCTCCCAATGCACAAGTGAAGAAAGCCACCGTCTTTCTCAATCCCGCA
 GCTTGCAAAGGCAAAGCCAGAAGCTATTTGAAAAAATGCTGCTCCAATTTTACACCTGTCTGGCATGG
 ATGTGACTGTTGTCAAGACGGATTATGAGGGACAAGCCAAGAAGCTCTGGAGTTGATGGAAGCACTGA
 TGTGATCATTGTTGCTGGAGGAGACGGCACACTGCAGGAGGTTGTTACTGGAGTACTGAGAAGAACAGAT
 GAGGCTACCTTCAGTAAGATTCCCATTGGATTTATCCCGCTGGGACAGACCAGTAGTTTGTAGTCACTC
 TCTTTGCTGAAAGTGAAACAAAGTCCAACATATTACAGACGCCACACTTGCCATTGTGAAAGGAGAGAC
 TGTTCCACTTGATGTCTTGCAGATCAAGGGTGAAGAAAGAACACCTGTGTATGCAATGACTGGCCTCCGG
 TGGGGATCTTTCAGAGATGCTGGCGTCAAAGTTAGCAAGTACTGGTATCTTGGTCCACTAAAAACCAAAG
 CAGCCACTTTTTTCAGCACTCTTCAGGAATGGCCTCAGACTCATCAAGCCTCCATCTTTACACGGGACC
 TAGAGAGAGACCTCCCATTGAGCCTGAAGAGACTCCTCCCAGGCCGTCTCTGTATAGGAGAATATTACGC
 AGGCTTGCCCTCATTCTGGGCACAGCCACAGGATGCCTCCTCCGAGAGGTAAGCCCTGAGGTCTGGAAG
 ATGTACAACTGTCCACCATTGAACTGTCCATCACAAACCGAAACACCACTTGACCTGATGAGCAAAGA
 GGATTTTATGAACATTTGCATTGAACCTGACACTGTCAGCAAAGGAGATTCATAATCATAGGAAGTAAG
 AAGGTGAGAGACCCTGGCCTGCGTGCAGCTGGCACCGAGTGCCTCCAAGCCAGCCACTGTACTCTGGTTC
 TTCCTGAGGGAAGTGGGCTCCTTCAGCATTGACAGCGAGGAGTACGAAGCCATGCCGGTGGAGGTCAA
 ACTACTGCCAGAAAGCTGCGGTTCTTCTGTGATCCGAGGAAGAGAGCAAAATGCTGCCGAGCACATCC
 CAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR206703 protein sequence
 Red=Cloning site Green=Tags(s)

MTAFFKTLRNHWKKTAGLCLL TWGGHWLYGKHCDNLLRRAACQEAQVFGNQLIPPNAQVKKATVFLNPA
 ACKGKARTLFEKNAAPILHL SGMDVTVVKTDYEGQAKKLELMESTDVIIVAGGDGTLQEVVTVGLRRTD
 EATFSKIPIGFIPLGQTSSL SHTLFAESGNKVQHITDATALIVKGETVPLDVLQIKGEKEQPVYAMTGLR
 WGSFRDAGVKVSKYWYLGPLKTKAAHFFSTLQEWPTHQASISYTGPRERPPIEPEETPPRPSLYRRILR
 RLASFWAQPDASSREVSPEVWKDVQLSTIELSITTRNTQLDLMSKEDFMNICIEPDTVSKGDFIIGSK
 KVRDPGLRAAGTECLQASHCTLVLPETEGSFSIDSEYEAMPVEVKLLPRKLRFFCDPRKREQMLPSTS
 Q

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



* The last codon before the Stop codon of the ORF

ACCN: NM_023538

ORF Size: 1266 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_023538.2](#)
RefSeq Size: 2225 bp

RefSeq ORF: 1266 bp

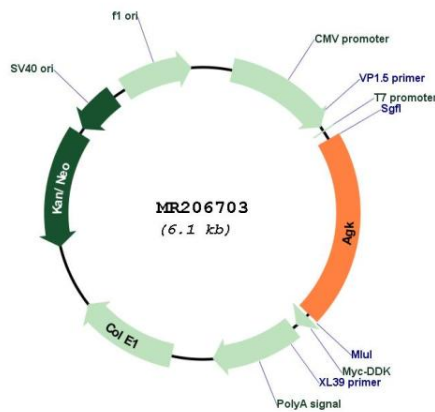
Locus ID: 69923

UniProt ID: [Q9ESW4](#)
Cytogenetics: 6 B1

MW: 47 kDa

Gene Summary: Lipid kinase that can phosphorylate both monoacylglycerol and diacylglycerol to form lysophosphatidic acid (LPA) and phosphatidic acid (PA), respectively (PubMed:15252046). Does not phosphorylate sphingosine (PubMed:15252046). Independently of its lipid kinase activity, acts as a component of the TIM22 complex (By similarity). The TIM22 complex mediates the import and insertion of multi-pass transmembrane proteins into the mitochondrial inner membrane by forming a twin-pore translocase that uses the membrane potential as the external driving force (By similarity). In the TIM22 complex, required for the import of a subset of metabolite carriers into mitochondria, such as ANT1/SLC25A4 and SLC25A24, while it is not required for the import of TIMM23 (By similarity). Overexpression increases the formation and secretion of LPA, resulting in transactivation of EGFR and activation of the downstream MAPK signaling pathway, leading to increased cell growth (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR206703