

## Product datasheet for **MG206703**

### Agk (NM\_023538) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Agk (NM_023538) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Agk
Synonyms:	2610037M15Rik; 6720408I04Rik; A1465370; Mulk
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG206703 representing NM_023538 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGACTGCATTCTTTAAAACGTTTCGAAATCATTGGAAGAAAACACAGCTGGGCTCTGTTTGCTGACAT  
GGGGAGGTCAGTGGCTCTACGGGAAGCACTGTGATAACCTGCTAAGAAGAGCAGCCTGTCAAGAAGCTCA  
GGTGTGGCAACCAGCTCATTCTCCCAATGCACAAGTGAAGAAAGCCACCGTCTTTCTCAATCCCGCA  
GCTTGCAAAGGCCAAAGCCAGAAGCTCTATTTGAAAAAATGCTGCTCCAATTTACACCTGTCTGGCATGG  
ATGTGACTGTTGTCAAGACGGATTATGAGGGACAAGCCAAGAAGCTCTGGAGTTGATGGAAGCACTGA  
TGTGATCATTGTTGCTGGAGGAGACGGCACACTGCAGGAGGTTGTTACTGGAGTACTGAGAAGAACAGAT  
GAGGCTACCTTCAGTAAGATTCCCATTTGATTTATCCCGCTGGGACAGACCAGTAGTTTGTGATCACACTC  
TCTTTGCTGAAAGTGAAACAAAGTCCAACATATTACAGACGCCACACTTGCCATTGTGAAAGGAGAGAC  
TGTTCCACTTGATGTCTTGACAGTCAAGGGTGAAAAAGAACAACTGTGTATGCAATGACTGGCCTCCGG  
TGGGATCTTTCAGAGATGCTGGCGTCAAAGTTAGCAAGTACTGGTATCTTGGTCCACTAAAAACAAAG  
CAGCCACTTTTTCAGCACTCTTCAGGAATGGCCTCAGACTCATCAAGCCTCCATCTCTTACACGGGACC  
TAGAGAGAGACCTCCCATTTGAGCCTGAAGAGACTCCTCCAGGCCGTCTCTGTATAGGAGAATATTACGC  
AGGCTTGCCTCATTCTGGGCACAGCCACAGGATGCCTCCTCCGAGAGGTAAAGCCTGAGGCTGGAAAG  
ATGTACAAGTGTCCACCATTTGAAGTGTCCATCACAAACCCGAAACACCCAAGTGTGATGAGCAAGA  
GGATTTTATGAACATTTGCATTGAACCTGACACTGTGAGCAAGGAGATTTTATAATCATAGGAAGTAAG  
AAGGTGAGAGACCCTGGCCTGCGTGCAGCTGGCACCAGTGCCTCCAAGCCAGCCACTGTACTCTGGTTC  
TTCCTGAGGGAAGTGAAGGCTCCTTCAGCATTGACAGCGAGGAGTACGAAGCCATGCCGGTGGAGGTCAA  
ACTACTGCCAGAAAGCTGCGGTTCTTCTGTGATCCGAGGAAGAGAGCAAAATGCTGCCGAGCACATCC  
CAG

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >MG206703 representing NM\_023538  
 Red=Cloning site Green=Tags(s)

MTAFFKTLRNHWKKTAGLCLL TWGGHWLYGKHCDNLLRRAACQEAQVFGNQLIPPNAQVKKATVFLNPA  
 ACKGKARTLFEKNAAPILHLSGMDVTVVKTDYEGQAKLLELMESTDVIIVAGGDGTLQEVVTGVLRRTD  
 EATFSKIPIGFIPLGQTSSL SHTLFAESGNKVQHITDATALAIVKGETVPLDLVLQIKGEKEQPVYAMTGLR  
 WGSFRDAGVKVSKYWYLGPLKTKAAHFFSTLQEWPTHQASISYTGPRERPPIEPEETPPRPSLYRRILR  
 RLASFWAQPQDASSREVSPEVWKDVLSTIELSITTRNTQLDLMSKEDFMNICIEPDTVSKGDFIIGSK  
 KVRDPGLRAAGTECLQASHCTLVLPETGEGSFSIDSEEYAMPVEVKLLPRKLRFFCDPRKREQLPSTSQ

TRTRPLE - GFP Tag - V

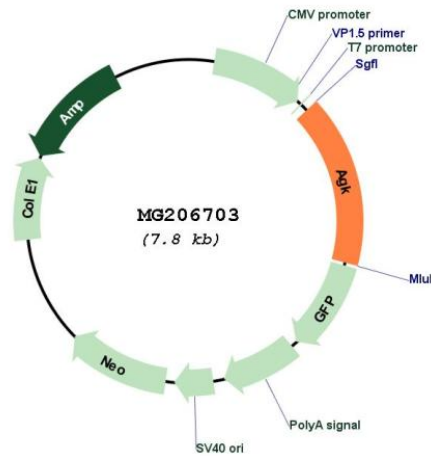
**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



**Plasmid Map:**



**ACCN:**

NM\_023538

<b>ORF Size:</b>	1263 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_023538.2</a>
<b>RefSeq Size:</b>	2236 bp
<b>RefSeq ORF:</b>	1266 bp
<b>Locus ID:</b>	69923
<b>UniProt ID:</b>	<a href="#">Q9ESW4</a>
<b>Cytogenetics:</b>	6 B1
<b>Gene Summary:</b>	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]