

## Product datasheet for MR206590

### Aurka (NM\_011497) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Aurka (NM_011497) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Aurka
Synonyms:	AIRK1; ARK-1; Ark1; AU019385; Aurora-A; AW539821; Ayk1; IAK; IAK1; Stk6
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR206590 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCTGTTGAGGGCGAGCCTGGATGCTGCAAACGGATAGGGAAGGCTGTGTGGCGTCGGGGTGACATGG  
ACAGATGTAAGAAAACTGTGTCTCCAGGCCTGTTAAGACCACTGTTCCCTTCGGTCCGAAACGCGTCTT  
GGTGACTGAGCAGATTCCATCTCAGAACCTAGGATCTGCTAGCAGTGGCCAGGCCACGGGTCTGTGT  
CCTTCTAACTCCCAGCGTGTCCCTTCAAGCCAGAACTTGGAGCAGGTGAGAAGCCGGCACCAAAAGC  
AGTTGCCAGCTGCCAGTGTTCCTCGACCTGTGTCCCGGCTCAATAACCCCAAGAAGATGAGCAGCCTGC  
AGCCTCCGAAATGATTCTGAAAAGGAGCAGGCATCCTTGCAAGACCGAAGACACAAAAAAGGCAG  
TGGACTTTGGAAGATTTGACATTGGCCGCCACTAGGAAAAGGGAAGTTTGAAATGTCTACTTGGCGC  
GGGAGAGACAAAGCAAGTTCATCCTGGCTCTGAAGGTGCTGTTTAAAACACAGCTGGAGAAGGCGAACGT  
GGAGCACCAGCTTCGGAGAGAGGTGGAGATCCAGTCGCACCTGCGGCACCCCAACATCCTCAGGCTGTAT  
GGCTATTTCCATGACGCCACCCGAGTTTATCTGATTCTAGAATATGCGCCCTTGGAACAGTCTATAGAG  
AGCTCAAAAACCTCTCCAAGTTTGACGAGCAGAGAACAGCTACTTACATCACTGAGTTGGCAAACGCTCT  
GTCTTACTGTCAATCAAAGAGAGTGATCCACAGAGACATTAAGCCAGAGAAGTACTGCTTGGCTCAAAC  
GGAGAGTTGAAGATTGCAGACTTCGGGTGGTCCGTGCATGCTCCATCTTCCAGGAGAACCACAATGTGTG  
GCACCCTGGACTACCTGCCCCAGAGATGATTGAAGCCGGATGCATGACGAGAAGGTGGACCTTGGAG  
CCTGGGCGTTCTCTGCTATGAGTTCCTAGTGGGATGCCTCCTTTGAGGACATACGTACCAGGAGACT  
TACAGAAGGATATCTCGGTTGAATCACTTTCCTGACTTTGTGACAGAGGGAGCCAGGGACCTCATT  
CAAGACTGTAAAAACACAACGCAAGCCAAAGGCTAACACTAGCGGAAGTCTTGGACACCCTTGGATCAA  
AGCTAATTCTTCAAACCTCCAAGTGGCCACACTAGCAAAGAGCCAAACCAGCAAATCATCT

AC**CGGCCGC**TCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGA  
TTACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >MR206590 protein sequence  
 Red=Cloning site Green=Tags(s)

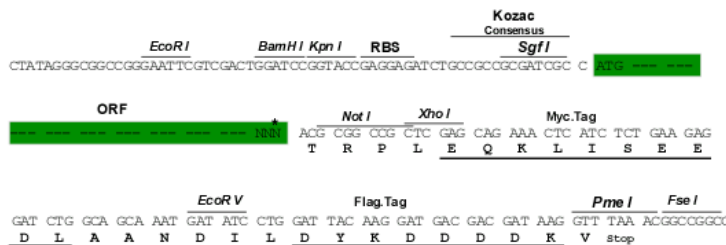
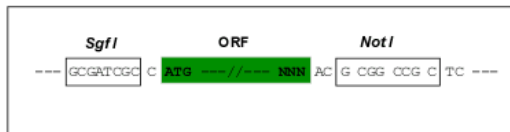
MAVEGEPGCKKRIGKAVWRRGDMDRCKENCVSRPVKTTVPFGPKRVLVTEQIPSQLGSASSGQAQRVLC  
 PSNSQRVPSQAQKL GAGQKPAPKQL PAASVPRPVSRLNPNQKNEQPAASGNDSEKEQASLQKTEDTKKRQ  
 WTLEDFDIGRPLGKGFVYLRERQSKFILALKVLFKTKLEKANVEHQLRREVEIQSHLRHPNLRLY  
 GYFHDA TRVYL ILEYAPLGT VYRELQKLSKFDEQRTATYITELANALSYCHSKRVIHRDIKPENLLLSGN  
 GELKIADFGWSVHAPSSRRTTMCGTLDYLPPEMIEGRMHDEKVDLWSLGLVLCYEFVGMPPFEAHTYQET  
 YRRISRVEFTFPDFVTEGARDLISRLLKHNASQRLTLAEVLEHPWIKANSKPPPTGHTSKEPTSKSS

TRPLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:** SgfI-NotI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_011497

**ORF Size:** 1251 bp

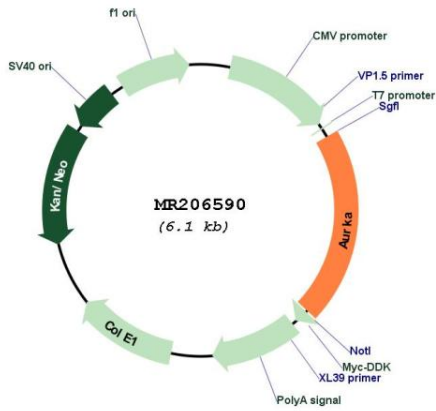
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone 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).

<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>Note:</b>	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
<b>RefSeq:</b>	<a href="#">NM_011497.2</a>
<b>RefSeq Size:</b>	1975 bp
<b>RefSeq ORF:</b>	1254 bp
<b>Locus ID:</b>	20878
<b>UniProt ID:</b>	<a href="#">P97477</a>
<b>Cytogenetics:</b>	2 94.84 cM
<b>MW:</b>	47.2 kDa
<b>Gene Summary:</b>	<p>Mitotic serine/threonine kinase that contributes to the regulation of cell cycle progression. Associates with the centrosome and the spindle microtubules during mitosis and plays a critical role in various mitotic events including the establishment of mitotic spindle, centrosome duplication, centrosome separation as well as maturation, chromosomal alignment, spindle assembly checkpoint, and cytokinesis. Required for normal spindle positioning during mitosis and for the localization of NUMA1 and DCTN1 to the cell cortex during metaphase (By similarity). Required for initial activation of CDK1 at centrosomes. Phosphorylates numerous target proteins, including ARHGEF2, BORA, BRCA1, CDC25B, DLGP5, HDAC6, KIF2A, LATS2, NDEL1, PARD3, PPP1R2, PLK1, RASSF1, TACC3, p53/TP53 and TPX2. Regulates KIF2A tubulin depolymerase activity. Required for normal axon formation. Plays a role in microtubule remodeling during neurite extension. Important for microtubule formation and/or stabilization. Also acts as a key regulatory component of the p53/TP53 pathway, and particularly the checkpoint-response pathways critical for oncogenic transformation of cells, by phosphorylating and stabilizing p53/TP53. Phosphorylates its own inhibitors, the protein phosphatase type 1 (PP1) isoforms, to inhibit their activity. Necessary for proper cilia disassembly prior to mitosis.[UniProtKB/Swiss-Prot Function]</p>

Product images:



Circular map for MR206590