

## Product datasheet for **MG217960**

### Vrk2 (NM\_027260) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Vrk2 (NM_027260) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Vrk2
Synonyms:	2810003O05Rik; AI447698
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>MG217960 representing NM\_027260  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGCACCAAGAAGAAAAGAAAATATAAGCTTCCGGTCCACTCCAGAAAGCAAATCTGGATGATA  
 TGGAAGGAAACCGGTGGGCACTGGCAAGATGATCGGCTCTGGAGGGTTGGACTGATATACTTAGCTTT  
 CCCACAATAAACCAAAACAAAGATGCAAGACATGTCATAAAGCTGGAGTATCAAGAAAATGGCCATTA  
 TTTTCAGAGCTTAAATTTTATCAGAGAGCTGCAAAAAGAGAATGTATCCAAAAGTGGATACAACAGAGGA  
 AACTTGATTATTTAGGAATTCCTGTATTTTATGGATTTGGTCTGACTGATTTCAAAGGAAGAAGTTACAG  
 ATTCATGGTAATGGAAAGACTTGAATAGATTTACAGAACTCCTGGACCAGAATGGTGGTTTTAAAAA  
 TTAACCGTCTACAACCTGGCATCAGGATGCTGGATGACTGGAATATATACATGAAAATGAGTATGTT  
 ATGGTGATATAAAGCCGCAATCTACTGTTGGATTTACAAATCCAGACCGGGTTTATCTTGCAGACTA  
 TGGACTTCTACAGATATTGTCCAATGGGAACCACAAACAGTATCAGGAAGATCCAGAAAGGGCCAT  
 AATGGGACAATAGAGTTTACAAGTTTGGATGCACACAAAGGAGTGGCCCCGTCCAGGAGGAGTATGTTG  
 AAATCCTTGTTACTGCATGCTGCACTGGCTCTTCGGGAAGCTTCTTGGGAAGCAAAGCTGGACGACCC  
 TGTGGCTGTCCAGACTGCTAAAACCAACCTGCTGGATGAACTCCCAGAGTCGGTGCTTAAGTGGGCTCCT  
 TCTGGAAGCAGTTGCAGTGAACCTGTCAAGTACTTGATGTATGTTATAATTTAGCTTATGATGACAAGC  
 CAGACTATCAGAAGCTCAAGAAAATTTGAATCCAGATGGAGTACCTTTAGGGCCACTGGAATTTCCAC  
 TAAAGTACAGAGTGTCCATGTGCGGACTCCAGCCCAACAAAAGTTGATTCACAAAGGCTACAAGAAA  
 CCAGCCAATGAGTTCAGCTAAGTTCCAAAGAAAGTCCACAGGGAGACAAGAGCAAGGCAGAGAGAGG  
 AGCAGGAAGACAGCCAGCCACAATGCTGCAGAGCAGGCCGCGCAGCACCGGAAAACCTCAAGCAAGGAA  
 AATACATGAATATTCTGATATTTTCAAGTGAAGTGCAGAGTCTTCAACAAACACCCAGCTATATGAGTTTC  
 CAAGGTTTCAATTTGCAAGCCCTATCTGGACTGCACTAGAAGAGATCCCATCAGGAAGCCAAGATCCCTGC  
 CTCGGTACAGACACAGCCACGGGTAATCTGGGAGTCAAGACTTGGAAAGTTCTCAAGGTTTTGGCC  
 TGCAATTTTTTCAAGTCTGAGTGAAGAGACAAAGGCAGATGTGTATTACTATGGGATCACTATATTC  
 TGCTGCTGATATTTGTATTTCTGCTTTGTATTTCTC

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:**

>MG217960 representing NM\_027260  
 Red=Cloning site Green=Tags(s)

MAPRRKEYKLPVPLPEGKILDDMEGNRWALGKMISSGGFGLIYLAFPTNKNPKDARHVIKLEYQENGL  
 FSELKFYQRAAKRECIQKWIQQRKLDYLGIPVFYGFGLTDFKGRSYRFMVMERLGIDLQKLLDQNGGFKK  
 LTVLQLGIRMLDVLEYIHENEYVHGDIIKANLLDFTNPDRVYLADYGLSYRYCPNGNHKQYQEDPRKGH  
 NGTIEFTSLDAHKGVAPSRSDVEILGYCMLHWLFGKLPWEAKLDDPVAVQTAKTNLLDELPEVSLKWAP  
 SGSSCSELVKYLMYVHNLAYDDKPDYQKLLKILNPDGVPLGPLEFSTKVQSVHVRTPAQQKVDSPKATRK  
 PANEFPKFPKKVHRETRARQREEQEDSQPTMLQSRPAAPENSRTRKIHEYSDIFSEMQLQQTPSYMSF  
 QGSYCKPYLDCTRRDPIRKPRSLPRYRHTPTGNLGVTDLESSPRFWPAIFQLTLSEETKADVYYYYGITIF  
 CLLIFVFLALYFL

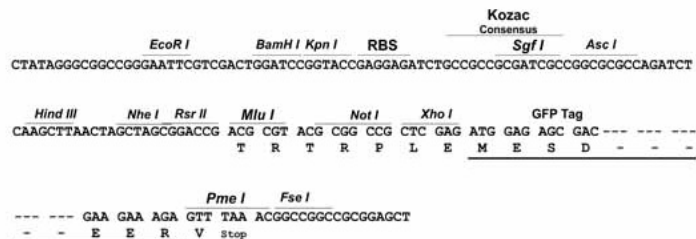
**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

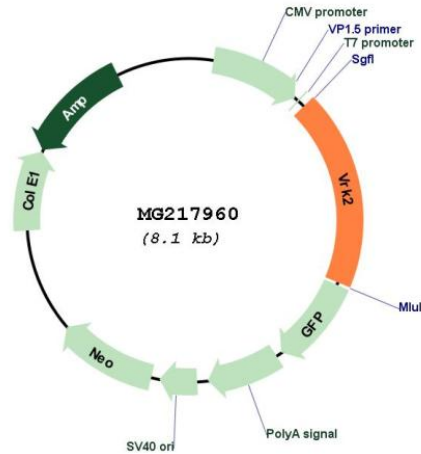
Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:



ACCN: NM\_027260

ORF Size: 1509 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>RefSeq:</b>	<a href="#">NM_027260.3</a> , <a href="#">NP_081536.2</a>
<b>RefSeq Size:</b>	1906 bp
<b>RefSeq ORF:</b>	1512 bp
<b>Locus ID:</b>	69922
<b>UniProt ID:</b>	<a href="#">Q8BN21</a>
<b>Cytogenetics:</b>	11 A3.3
<b>Gene Summary:</b>	<p>Serine/threonine kinase that regulates several signal transduction pathways. Isoform 1 modulates the stress response to hypoxia and cytokines, such as interleukin-1 beta (IL1B) and this is dependent on its interaction with MAPK8IP1, which assembles mitogen-activated protein kinase (MAPK) complexes. Inhibition of signal transmission mediated by the assembly of MAPK8IP1-MAPK complexes reduces JNK phosphorylation and JUN-dependent transcription. Phosphorylates histone H3. Phosphorylates 'Thr-18' of p53/TP53, and thereby increases its stability and activity. Phosphorylates BANF1 and disrupts its ability to bind DNA and reduces its binding to LEM domain-containing proteins. Downregulates the transactivation of transcription induced by ERBB2, HRAS, BRAF, and MEK1. Blocks the phosphorylation of ERK in response to ERBB2 and HRAS. May also phosphorylate MAPK8IP1. Can also phosphorylate the following substrates that are commonly used to establish in vitro kinase activity: casein, MBP and histone H2B, but it is not sure that this is physiologically relevant (By similarity).[UniProtKB/Swiss-Prot Function]</p>