

## Product datasheet for **MC206815**

### Prkag2 (BC015283) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Prkag2 (BC015283) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Prkag2
Synonyms:	AAKG, WPWS, AAKG2, H91620p
Mammalian Cell Selection:	Neomycin
Vector:	PCMV6-Kan/Neo (PCMV6KN)
E. coli Selection:	Kanamycin (25 ug/mL)



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**Fully Sequenced ORF:** >BC015283  
 CCCAGCACAAAGACTTCTGCCACGCGTAACCAAAAGTAGCACGGGCCGAGACTCTGCACCCAATGATTCCG  
 TAGGAGAAAGAGGACGCTCCAACCCGGCATTCCGCGGACTGCCAGCCCCTCGGGTGGAGCCCCGCGTGTT  
 ACCTGCGCCACCCGCCCTCCCGCGGAAGTCCCCACGAGGTGTTTTAGGGTGGGAGGACAGTCATAAAA  
 AGCGCGTGGCTCCAGTGTAAACGGCAGCAGTCTGGGAGGCAGCGAGGGGACCGAACCCCGGGGACGAGGC  
 ACCGGAATTAACCTTAGCTAAAGTTATGGGAAGCGCAGCCATGGACACCAAGAAGAAGAAGAGGTTTT  
 CAGCCCGGGCGGAGCAGTGGCAAAAAGAACCCTAGCCTGAAGAGGCGGTCACTGCGAGTGCACATTCCG  
 GACCTGAGTTCCCTTGGCCATGCCGCTCCTGGATGGAGATGTGGAGAATTCAGAAAAGCATTATCTCGGA  
 AGGTGGACAGTCCCTTACGCTCAGGCAGCCCCTCCAGAGGACTTCTTCCAGAGGCCCCAGCCCCGGCC  
 CTCAGCCCTGTGTCTGCTCCCCTGAGGCCAAGACGAGCCCTGGCTCTCCAAAAGTGTGTTCCCGTTC  
 TCCTACCAGGAGTCCCCTCCAGCTCTCCAGCCGGATGAGCTTCAGTGGGATCTCCGCTCCTCATCCA  
 AAGAGTCTTCGCCCAACTCCAACCCGTCTACCTCTCTGGGGCATCCGGTCTTCTCACGGTCCAGAAA  
 AACCTCCAGCGTCTCCTTCTCCGTCAACACCCACCAAGTGACCAAGCAGCACCCATTTCCCCTGGAG  
 TCCTACAAGCAGGAGCCTGAACGCCAGAGAGCCGCATCTATGCTTCTCGTCCCCTCCAGACACTGGGC  
 AGCGCTTCTGCCTGGCCTTTCAGAGCCCAGCGCAGCTCCGCTGGCATCCCCGACATACCATGCTCCTTT  
 GAGAACTGCGGTGCTGGCGGGCGCCCGGACCCGCGAAAGCCGCGATGTGGAGAAGCTGGAGTCCAG  
 GAGGAAGAAGACTCAGAAAGTGGCTTTTATATGCGATTATGAGGTACACAAAGTGTATGACATCGTTC  
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 CAACGGAGTCCGTGCAGCGCCGCTGTGGGAAAAGTAAAAAGCAGAGCTTTGTAGGAATGCTCACGATTACA  
 GATTTTCATAAATATCCTACACAGATACTATAAATCACCCATGGTACAGATTTATGAATTGGAAGAACATA  
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 GAGCCTCTCGATGCTGTATACTCGTTGATCAAAAATAAATCCACAGATTGCCAGTTATTGACCCTATC  
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 TGCCAAAAGCCTGCCTTTCATGAAGCAGAACCTGGATGAGCTTGGAAATCGGAACGTACCACAATATTGCCT  
 CATTACCCAGACACTCCCATCATCAAAGCCTTGAACATCTTCGTGGAGAGACGGATATCCGCATTGCCCT  
 GTGGTGGATGAGTCAGGAAAAGTTGTAGATATTTATTCCAAGTTTGTGTAATTAATCTTGTGCTGAGAA  
 AAACGTACAATAACTTGGACATCACAGTGACCCAGGCCCTGCAGCACCGCTCGCAGTATTTTGGGGTGT  
 GGTGAAGTGCAGTAAGCTGGAACACTGGAGACCATCGTGGACAGGATAGTGAGAGCCGAGGTCCATCGG  
 CTGTTGTAGTGAATGAAGCAGATAGCATTGTGGGTATTATCTCCCTGTCAGACATCCTGCAAGCCCTGA  
 TCCTCACACCAGCAGGTGCCAAACAGAAGGAGACAGAGACTGAATGACCCCGTGAATGTAGACGCCCGC  
 GCAGGAGAACTTGAACAAAGTCTCGGGTCAAGTTCCTCATGAACACTGGCTGCAATAGAAGAGAGT  
 AAAATGGCTAAGAATGTATACCAGGTTTACGATGGGTATTTTCCAGTGATTTGTAAGTATAGGAAAA  
 GATTTTATGTGCTTGAAGATTACGGCTTGCCTCAAAGACTGCCCTCAGACCTGTCTGAAGGATTTTCAA  
 TGCTGTATGTCATTAAAGTGCAGTGTGCTGAAATAGTACTACTTTTCAATTTCAAAGAAGTCACTGGGA  
 TGGAACAGGTGACAGAAAGTGAAGCGGCACGTCCAGATCACGGTGCCTTATGTCCAAACGCAATATG  
 TCACCGCCGCTGCCGCACGCCCAAGTGTGCTGAAGAGACACCCAGCCCAAGTGTGAGCATCTCAGA  
 CCTTTTACCCAGTCTCTCTTTTCACTAATTTGGTTGAAAAGTTTTAATTTGAGTACAGGCAACTGAAA  
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 GCAACAGCGCTTTATTTATTTTACTCTCATGCAGGTTTCAACCTACATCCTTTGGTGAAGTACAGGTCAC  
 CATACCTACGAATAAAACCTTGATTGTTCTCAAGTGGAAAATCTCTGGAGATTTTAGTTTGGATCTGG  
 AAAGGCTATGCCTTCAAACAGCCACTGTAGGCTTCTTAAACGTTTATGAAAACAGGCTGTGGTGCAG  
 GGAAGAAGTAACGGAAGACGCTTTTTTTTTATTGTGTGTTGAAATGTAACCTCATGATGTTTGTGTGAC  
 CGCTGACAAGACGCTTGAACTTTTATTGTGACACATAAAACAGTATTGTCATGCAGTTGAAGGGAAACT  
 CTTTCCCCTCCCACACCCACAACCCCAAGCCCAAGTGTGCTGCTGAAAATGTTGACACTATAT  
 ATCTGTGTGTATATATGAGCAGAGTTTGGGGTTTTGTTTTGGGGTTTTGTTTCGTTTTGTTTTTCAGA  
 TTGAAAATTAATAAATCCTGTCTAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

**Restriction Sites:** RsrII-NotI  
**ACCN:** BC015283  
**Insert Size:** 1701 bp

<b>OTI Disclaimer:</b>	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
<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="#">BC015283</a> , <a href="#">AAH15283</a>
<b>RefSeq Size:</b>	3132 bp
<b>RefSeq ORF:</b>	1701 bp
<b>Locus ID:</b>	108099
<b>Cytogenetics:</b>	5 A3
<b>Gene Summary:</b>	AMP/ATP-binding subunit of AMP-activated protein kinase (AMPK), an energy sensor protein kinase that plays a key role in regulating cellular energy metabolism. In response to reduction of intracellular ATP levels, AMPK activates energy-producing pathways and inhibits energy-consuming processes: inhibits protein, carbohydrate and lipid biosynthesis, as well as cell growth and proliferation. AMPK acts via direct phosphorylation of metabolic enzymes, and by longer-term effects via phosphorylation of transcription regulators. Also acts as a regulator of cellular polarity by remodeling the actin cytoskeleton; probably by indirectly activating myosin. Gamma non-catalytic subunit mediates binding to AMP, ADP and ATP, leading to activate or inhibit AMPK: AMP-binding results in allosteric activation of alpha catalytic subunit (PRKAA1 or PRKAA2) both by inducing phosphorylation and preventing dephosphorylation of catalytic subunits. ADP also stimulates phosphorylation, without stimulating already phosphorylated catalytic subunit. ATP promotes dephosphorylation of catalytic subunit, rendering the AMPK enzyme inactive (By similarity).[UniProtKB/Swiss-Prot Function]