

## Product datasheet for **MC206532**

### **Gprk5 (BC019379) Mouse Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Gprk5 (BC019379) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Gprk5
Synonyms:	GRK5
Mammalian Cell Selection:	Neomycin
Vector:	PCMV6-Kan/Neo (PCMV6KN)
E. coli Selection:	Kanamycin (25 ug/mL)



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**Fully Sequenced ORF:** >BC019379  
GTTTGGCAGCAGCGGCGGCGAGCTCGAGCAGCGGCGGCGAGCGGCATCATCCCAGACGCTGACAGCACA  
GCCGGCCGGCTCCCTCGCTGACTGCCGACTGTCAATGGAGCTGGAAAACATCGTGCCCAACACGGTCTTG  
CTGAAAGCCCGGAAGGGGGTGGAGGAAAGCGCAAAGGGAAAAGCAAGAAGTGAAGGAAATCCTGAAGT  
TTCCTCACATCAGCCAGTGTGAAGACCTCCGAAGGACCATAGACAGAGATTACTACAGTCTCTGTGACAA  
GCAACCAATTGGGAGACTGCTTTTTCGACAGTTCTGTGAAACCAGGCCTGGGCTGGAGTGCTACATTTCAG  
TTCTGGACTTAGTGCCAGAATATGAAATTAAGTCCAGATGAAAACCTTGGGGCGAAGGGGAAGGAAATAA  
TGACCAAGTACCTCACTCCAAAGTCCCCAGTCTTCATTGCCCAAGTTGGACAGGACCTGGTCTCCCAGAC  
AGAGAAGAAGCTCCTGCAGAGCCCTGCAAGAAGTCTTCTCTGCTTGTGCTCAGTCTGTCCATGACTAC  
TTGACGGGAGACCCCTTCCACGAGTACCTGGATAGCATGTATTTTGACCGTTTTCTGCAGTGAAATGGT  
TAGAAAGACAACCAAGTACCAAAAAACATTTCCGGCAGTACCGAGTGTGGGCAAAGGGGCTTTGGAGA  
GGTCTGTGCTGCCAGGTTCCGGCCACTGGTAAAATGTATGCTTGTAAACGCTTAGAGAAGAAGAGGATC  
AAAAAGAGGAAAGGCGAATCCATGGCACTCAACGAAAAGCAGATTCTTGAGAAGGTCAACAGCCAGTTTG  
TGGTCAACCTGGCTATGCCTATGAAACCAAAGATGCACATATGCCTGGTCTGACCATTATGAATGGTGG  
TGACCTGAAGTTTACATCTACAATATGGGGAATCCTGGCTTTGAGGAAGAGCGAGCCTTATTTTATGCA  
GCTGAGATCCTCTGTGGCTAGAAAGACTTACACCGTGAGAACACTGTCTATAGAGATCTAAAACCCGAAA  
ACATCTTGCTGGATGATTATGGCCACATAAGGATCTCAGACCTCGGACTGGCCGTGAAGATCCCCGAGGG  
AGACCTTATCCGTGGCCGGGTAGGCACTGTTGGCTACATGGCCCCAGAAGTTCTGAACAACAGCGATAT  
GGACTGAGCCCTGACTACTGGGGCTGGGCTGCCTCATCTATGAGATGATTGAAGGCCAGTACCATTTC  
GAGGTCGCAAGGAGAAGGTTAAGCGGGAAGAGGTGGATCGCCGGGTGCTGGAGACTGAGGAAGTATATTC  
CTCAAAGTTCTCTGAAGAGGCCAAGTCCATCTGCAACATGCTGCTCACCAAGACTCGAAGCAGAGGCTG  
GGCTGCCAGGAGGAGGCCCGCAGGTCGAAGAGCACCCCTTCTTCCAGAACATGAACCTTAAAGCCG  
TGGAGGCTGGGATGTTGGACCTCCCTTCGTTCCAGATCCCCGGGCTGTATACTGCAAGGATGTGCTGGA  
CATTGAGCAGTTCTCCACTGTGAAAGGTGCAACCTGGACCATACGGACGATGATTTTTACTCAAAGTTC  
TCTACAGGCTCTGTGCCAATCCATGGCAAAATGAGATGATAGAAACAGAATGTTTCAAGGAGCTGAATG  
TGTTCCGACCTAACGGTACCCTCTCACCAGACCTGAACAGAAGTCAAGCTCCAGAACCGCAAAGAAAGG  
GCTGTTCCACAGACTCTCAGGCGGAGCATCAAAGCAATTCGAAGGTTACCTACTCCTAAGACCAGT  
TGTAACCACCGAATAAATCAAACCACATCAATCAAACCTCACTGGAAGCAGCTAGTTTCGGCTCTGGC  
CTTGAAGTCAAAGTGAACAGCTCAGAGCCTTCTACTTGAAGCAGAATTTATAGCCAGGGGAGCTTC  
CACTGTGGCTCAGTGGCCAGCAAAGCTCCAGTGGGAACTAAGATAGGAGACCGTTCCCCAATAACAAC  
CTCAAAGTTTCTCAAAGAAATTTCCACTCAGGTCTGTTTTCCAAGTGGCCCAAGCTGGGGTGGACTAG  
AATTTTCTTGTGAACATTGCAATAGAAACCCAAATGGGATATGACAGCTTGACCGGATTTAATAGCAT  
CCTAACTAGAAGTGAATTTTGTCTTTATTTTTAAAGGAAAGTTTTGTAATTTCAAAAAAAAAAAAAAA AA

**Restriction Sites:** EcoRI-NotI

**ACCN:** BC019379

**Insert Size:** 1773 bp

**OTI Disclaimer:** 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).

**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:** [BC019379](#), [AAH19379](#)

**RefSeq Size:** 2242 bp

**RefSeq ORF:** 1773 bp

**Locus ID:** 14773

**Cytogenetics:** 19 56.52 cM

**Gene Summary:** Serine/threonine kinase that phosphorylates preferentially the activated forms of a variety of G-protein-coupled receptors (GPCRs). Such receptor phosphorylation initiates beta-arrestin-mediated receptor desensitization, internalization, and signaling events leading to their down-regulation. Phosphorylates a variety of GPCRs, including adrenergic receptors, muscarinic acetylcholine receptors (more specifically Gi-coupled M2/M4 subtypes), dopamine receptors and opioid receptors. In addition to GPCRs, also phosphorylates various substrates: Hsc70-interacting protein/ST13, TP53/p53, HDAC5, and arrestin-1/ARRB1. Phosphorylation of ARRB1 by GRK5 inhibits G-protein independent MAPK1/MAPK3 signaling downstream of 5HT4-receptors. Phosphorylation of HDAC5, a repressor of myocyte enhancer factor 2 (MEF2) leading to nuclear export of HDAC5 and allowing MEF2-mediated transcription. Phosphorylation of TP53/p53, a crucial tumor suppressor, inhibits TP53/p53-mediated apoptosis. Phosphorylation of ST13 regulates internalization of the chemokine receptor. Phosphorylates rhodopsin (RHO) (in vitro) and a non G-protein-coupled receptor, LRP6 during Wnt signaling (in vitro).[UniProtKB/Swiss-Prot Function]