

Product datasheet for **MR209199**

Grk5 (NM_018869) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Grk5 (NM_018869) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Grk5
Synonyms:	Gprk5
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR209199 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGAGCTGGAAAACATCGTGGCCAACACGGTCTTGCTGAAAGCCCGGGAAGGGGTGGAGGAAAGCGCA
 AAGGGAAAAGCAAGAAGTGAAGGAAATCCTGAAGTTTCTCACATCAGCCAGTGTGAAGACCTCCGAAG
 GACCATAGACAGAGATTACTACAGTCTCTGTGACAAGCAACCAATTGGGAGACTGCTTTTCGACAGTTC
 TGTGAAACCAGGCCTGGGCTGGAGTGTACATTGACTTCTGGACTTAGTGGCAGAATATGAAATTA
 CAGATGAAAACCTTGGGGCGAAGGGGAAGGAAATATGACCAAGTACCTCACTCCAAAGTCCCCAGTCTT
 CATTGCCCAAGTTGGACAGGACCTGGTCTCCAGACAGAGAAGAAGCTCCTGCAGAGCCCCTGCAAAGAA
 CTCTTCTGCTGTGCTCAGTCTGTCCATGACTACTTGACGGGAGACCCCTCCACGAGTACCTGGATA
 GCATGTATTTGACCGTTTTCTGCAGTGGAAATGGTTAGAAAGACAACCAGTGACCAAAAACACTTTCCG
 GCAGTACCGAGTCTGGGCAAAGGGGGCTTTGGAGAGTCTGTGCCTGCCAGTTCCGGGCCACTGGTAAA
 ATGTATGCTTGTAAACGCTTAGAGAAGAAGAGGATCAAAAAGAGGAAAGGCGAATCCATGGCACTCAACG
 AAAAGCAGATTCTTGAGAAGGTCAACAGCCAGTTTGTGGTCAACCTGGCCTATGCCTATGAAACCAAGA
 TGCACTATGCCTGGTTCTGACCATATGAATGGTGGTACCTGAAGTTTACATCTACAATATGGGGAAT
 CCTGGCTTTGAGGAAGAGCGAGCCTATTTTATGCAGCTGAGATCCTCTGTGGCCTAGAAGACTTACACC
 GTGAGAACACTGTCTATAGAGATCTAAAACCCGAAAACATCTTGTGGATGATTATGGCCACATAAGGAT
 CTCAGACCTCGGACTGGCCGTGAAGATCCCCGAGGGAGACCTTATCCGTGGCCGGTAGGCACTGTTGGC
 TACATGGCCCCAGAAGTTCTGAACAACCAGCGATATGGACTGAGCCCTGACTACTGGGGCCTGGGCTGCC
 TCATCTATGAGATGATTGAAGGCCAGTCAACATTTTCGAGTTCGCAAGGAGAAGGTTAAGCGGGAAGAGGT
 GGATCGCCGGGTGCTGGAGACTGAGGAAGTATATTCTCCAAGTTCTCTGAAGAGGCAAGTCCATCTGCTGC
 AACATGCTGCTCACCAAAGACTCGAAGCAGAGGCTGGGCTGCCAGGAGGAGGGAGCCGCCAGGTCAAGA
 GGCACCCCTTCTCAGGAACATGAACCTTAAGCGCCTGGAGGCTGGGATGTTGGACCTCCCTTCGTTCC
 AGATCCCCGGGCTGTATACTGCAAGGATGTGCTGGACATTGAGCAGTTCTCCACTGTGAAAGGTGTCAAC
 CTGGACCATACGGACGATGATTTTTACTCAAAGTTCTCTACAGGCTCTGTGCCAATTCATGGCAAAATG
 AGATGATAGAAACAGAATGTTTCAAGGAGCTGAATGTGTTCCGACCTAACGGTACCCTCTACCAGACCT
 GAACAGAAGTCAAGCTCCAGAACCGCAAAAGAAAGGGCTGTTCCACAGACTCTTCAGCGGCAGCATCAA
 AGCAATCCAAGAGTTCACTACTCCTAAGACCAGTTGTAAACACCGAATAAATCAAACCATCAATT
 CAAACTCCACTGAAGCAGC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR209199 protein sequence
 Red=Cloning site Green=Tags(s)

MELENIVANTVLLKAREGGGKRKGSKKWKEILKFPHISQCEDLRRTIDRDYYSLCDKQPIGRLLFRQF
 CETRPGLECYIQFLDLVAEYEITPDENLGAKGKEIMTKYLPKSPVFIQVQDQLVSQTEKLLQSPCKE
 LFSACAQSVHDYLTGDPFHEYLDSEMYFDRFLQWKWLERQPVTKNTFRQYRVLGKGGFGEVCACQVRATGK
 MYACKRLEKKRIKKRKGESMALNEKQILEKVNQFVVNLAYAYETKDALCLVLTIMNGGDLKFHIYNMGN
 PGFEEERALFYAAEILCGLEDLHRENTVYRDLKPENILLDDYGHIRISDLGLAVKIPEGDLIRGRVGTG
 YMAPEVLNNQRYGLSPDYWGLGCLYEMIEGQSPFRGRKEVKREEVDRRVLTEEEVYSSKFSEEAKSIC
 NMLLTKDSKQRLGCQEEGAAEVKRHPFFRNMFKRLEAGMLDPPFVDPRAVYCKDVLIDIEQFSTVKGVN
 LDHTDDDFYSKSTGSVPIPWQNEIETEFCNELNVFPGNGTLPDLNRSQPPEPKKGLFHRLFRRHQH
 SNSKSSPTPKTSCNHRINSNHINSNSTGSS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_018869

ORF Size: 1773 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).

- 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: [NM_018869.2](#)

RefSeq Size: 3182 bp

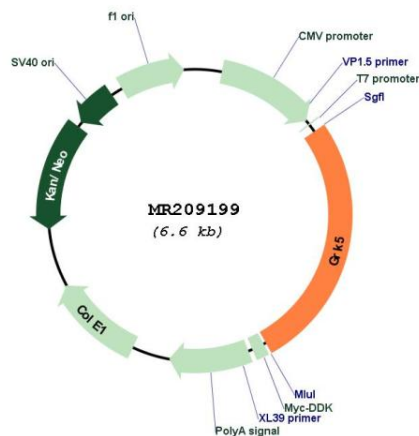
RefSeq ORF: 1773 bp

Locus ID: 14773

UniProt ID: [Q8VEB1](#)

Cytogenetics:	19 56.52 cM
MW:	67.7 kDa
Gene Summary:	<p>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]</p>

Product images:



Circular map for MR209199