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Product datasheet for MG227251

Ptk6 (NM_009184) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ptk6 (NM_009184) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Ptk6
Synonyms:	BRK; Sik; tks; Tksk
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

View online »

ORF Nucleotide Sequence:

>MG227251 representing NM_009184
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGTGTCTTGGGACAAGGCTCACCTGGGTCCTAAGTATGTGGGCCTCTGGGACTTCAAGGCACGGACAG
ATGAGGAGCTGAGCTTTCAGGCAGGAGACCTCCTCCATGTTACCAAGAAGGAGGAACTGTGGTGGTGGGC
CACCCTGCTGGATGCAGAAGGCAAGGCCTTGGCTGAGGGCTATGTGCCTCACAACTACCTGGCTGAGAAG
GAAACTGTGGAGTCTGAACCGTGGTTCTTTGGTTGCATCTCCCGCTCAGAGGCCATGCACAGGCTGCAGG
CTGAGGACAACTCGAAGGGTGCCTTCCTGATCAGAGTCAGCCAGAAGCCAGGAGCAGACTATGTCCTCTC
TGTCCGGGATGCTCAGGCCGTGCGACATTACAGGATCTGGAAGAACAACGAGGGCCGGCTGCACCTGAAT
GAGGCGGTATCCTTCTCCAATCTGTCTGAGCTTGTGGACTACCATAAGACCCAGAGCCTGTCTCATGGCC
TACAGCTGTCCATGCCCTGCTGGAAGCACAAAACTGAGCCCTTGCCCCACTGGGATGACTGGGAGAGGCC
GAGGGAGGAGTTCACACTCTGTAAGAAGCTGGGGGCCGGCTACTTTGGGGAGGTCTTTGAAGCGCTCTGG
AAAGGCCAGGTCCATGTGGCTGTGAAGGTGATCTCTAGAGACAATCTCCTGCACCAGCACACCTTCCAGG
CTGAGATTCAGGCCATGAAGAAGCTGCGGCACAAGCACATCCTGTCACTGTACGCTGTGGCGACTGCAGG
GGACCCGGTCTACATCATCACGGAGCTCATGCCCAAGGGGAACCTGCTGCAGCTACTGCGTGACTCTGAT
GAGAAAGCCCTGCCTATTTTGGAGCTGGTGGACTTTGCATCACAGGTTGCTGAGGGCATGTGCTACCTGG
AATCTCAGAATTACATCCACCGTGACCTGGCTGCAAGGAACGTTCTTGTTACAGAGAACAATCTCTGCAA
AGTGGGGGACTTTGGGCTTGCCAGGCTTGTCAAGGAGGACATCTACCTTTCCCATGAGCACAATGTCCCC
TACAAATGGACAGCACCTGAGGCACTTTCCCGAGGGCATTACTCCATCAAGTCTGATGTCTGGTCTTTTG
GAGTTCTTCTTCATGAAATTTTCAGCAGGGGGCAGATGCCCTACCCAGGCATGTCCAATCATGAAACCTT
CCTGAGGGTGGATGCCGGCTACCGCATGCCCTGCCCTCTGGAGTGCCCACCCAACATACACAAGCTGATG
CTCAGCTGCTGGAGCAGAGACCCCAAGCAGAGACCTTGCTTCAAAGACCTGTGTGAGAAACTCACAGGTA
TCACCAGGTATGAGAACCTGGTC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

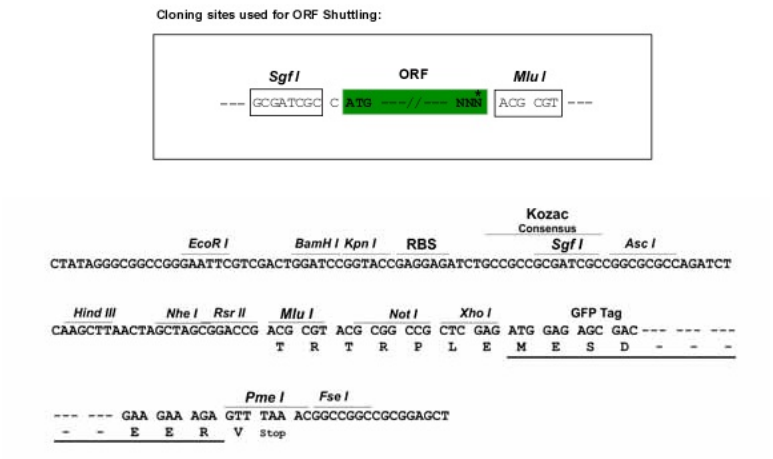
>MG227251 representing NM_009184
Red=Cloning site Green=Tags(s)

MVSWDKAHLGPKYVGLWDFKARTDEELSFQAGDLLHVTKKEELWWWATLLDAEGKALAEGYVPHNYLAEK
ETVESEPWFFGCISRSEAMHRLQAEDNSKGAFLIRVSQKPGADYVLSVRDAQAVRHYRIWKNNEGRLHLN
EAVSFSNLSELVDYHKTQSLSHGLQLSMPCWKHKTEPLPHWDDWERPREEFTLCKKLGAGYFGEVFEALW
KGQVHVAVKVISRDNLLHQHTFQAEIQAMKKLRHKHILSLYAVATAGDPVYIITELMPKGNLLQLLRDSD
EKALPILELVDFASQVAEGMCYLESQNYIHRDLAARNVLVTENNLCKVGDFGLARLVKEDIYLSHEHNVP
YKWTAPEALSRGHYSIKSDVWSFGVLLHEIFSRGQMPYPGMSNHETFLRVDAGYRMPCPLECPPNIHKLM
LSCWSRDPKQRPCFKDLCEKLTGITRYENLV

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

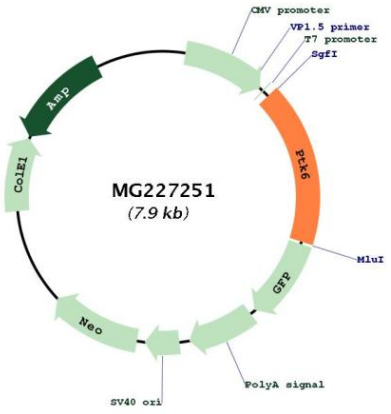
Cloning Scheme:



ACCN:	NM_009184
ORF Size:	1353 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_009184.2, NP_033210.1
RefSeq Size:	2286 bp
RefSeq ORF:	1356 bp
Locus ID:	20459
UniProt ID:	Q64434
Cytogenetics:	2 103.62 cM

Gene Summary: Non-receptor tyrosine-protein kinase implicated in the regulation of a variety of signaling pathways that control the differentiation and maintenance of normal epithelia, as well as tumor growth. Function seems to be context dependent and differ depending on cell type, as well as its intracellular localization. A number of potential nuclear and cytoplasmic substrates have been identified. These include the RNA-binding proteins: KHDRBS1/SAM68, KHDRBS2/SLM1, KHDRBS3/SLM2 and SFPQ/PSF; transcription factors: STAT3 and STAT5A/B and a variety of signaling molecules: ARHGAP35/p190RhoGAP, PXN/paxillin, BTK/ATK, STAP2/BKS. Associates also with a variety of proteins that are likely upstream of PTK6 in various signaling pathways, or for which PTK6 may play an adapter-like role. These proteins include ADAM15, EGFR, ERBB2, ERBB3 and IRS4. In normal or non-tumorigenic tissues, PTK6 promotes cellular differentiation and apoptosis. In tumors PTK6 contributes to cancer progression by sensitizing cells to mitogenic signals and enhancing proliferation, anchorage-independent survival and migration/invasion. Association with EGFR, ERBB2, ERBB3 may contribute to mammary tumor development and growth through enhancement of EGF-induced signaling via BTK/AKT and PI3 kinase. Contributes to migration and proliferation by contributing to EGF-mediated phosphorylation of ARHGAP35/p190RhoGAP, which promotes association with RASA1/p120RasGAP, inactivating RhoA while activating RAS. EGF stimulation resulted in phosphorylation of PNX/Paxillin by PTK6 and activation of RAC1 via CRK/CrKII, thereby promoting migration and invasion. PTK6 activates STAT3 and STAT5B to promote proliferation. Nuclear PTK6 may be important for regulating growth in normal epithelia, while cytoplasmic PTK6 might activate oncogenic signaling pathways.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MG227251