

Product datasheet for **MG206652**

Itpk1 (NM_172584) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Itpk1 (NM_172584) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Itpk1
Synonyms:	BC031182
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG206652 representing NM_172584 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCAGACCTTCTGAAAGGGAAGAGAGTTGGCTACTGGCTGAGCGAGAAGAAAGTCAAGAAGCTCAATT
TCCAGGCCTTCGCGGAGCTGTGCAGGAAGCGAGGGATAGAAGTCGTGCAGCTGAACCTCAGCAGACCGAT
TGAGGAGCAGGGCCCCCTGGACGTCATCATCCACAAGCTGACCGATGTCATCCTCGAGGCAGACCAGAAT
GACAGCCAGTCCCTGGAATTGGTGCACAGGTTCCAAGAGTACATCGATGCTCACCTGAGACCATCGTCT
TGGATCCCTCCCGCCATCAGGACCCTGTTAGACCGTTCCAAGTCTACGAATTATCCGAAAGATCGA
GGCTACATGAAAGATGACAGAAATCTGCTCGCCGCTTTCATGGAGCTCAGGAGCCTGTGTGGGGAGGAC
ACCATGAGGCTGCTGGAGCAGAACGGCCTGGCCTTCCCCTTCATTTGAAAACCAGAGTGCTCATGGAA
CCAACTCTCATGAGATGGCTATTGTGTTCAACCAAGAGGGCTGAATGCCATCCAGCCTCCCTGTGTGGT
CCAGAACTTCAACCAACAATGCTGTCTGTACAAGGTGTTGTGGTGGGCGAGTCTACACAGTGGTC
CAGAGACCCTCACTCAAGAACTTCTCTGCGGGCACATCAGATCGTGAGTCCATCTTCTTCAACAGCCACA
ATGTGTCAAAGCCGGAGTCTTATCAGTCTCTACTGAGCTGGACAAGATCGAGGGTGTGTTCGAACGGCC
AAGCGATGAGGTTATCCGGGAGCTGTCCCGGCTCTGCGGAGGCGTGGGAGTGTCACTGTTTGGAAAT
GACATCATATTAACAACAGACCGGGCAGCATGCAGTATCGATGTCATGCAATGCCTCCAGGCTATGAAG
GAGTGAGTGAGTTCTTTACCGACCTCCTGAACCACATTGCCACAGTTCTGCAAGGCCAGAGCACGGGAGG
AGCTGCCACGGAGGAAGTGGCCCCGCTAAGGCACAACAGGCTCCTGGCGAACCAGGACAGCCTGGCT
GGGGAGCGGACGTGCAAGTCCAGCCCTGGCTGCTGTGGCAGCATGAAGGGCCAGGACACACCCTGGAAGA
CTGAGACCGAAGCAGGCAACATGGGCGTGGTCTCCGCCAAGCTGCCGACACAGAGACTTGGCTGCAC
CACTGGCGTATCACCCAGCTTCCAGCAGCACTGTGTGGCCTCTCTGGCCACCAAGGCTTCTCTCACAG

ACGGTACGGGCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >MG206652 representing NM_172584
 Red=Cloning site Green=Tags(s)

MQTF LKGRVGYWLSEKKVKKLNFAELCRKRGIEVVQLNLSRPIEEQGPLDVIHKLTDVILEADQN
 DSQSLELVHRFQEYIDAHPETIVLDPLPAIRTL LDRSKSYELIRKIEAYMKDDRICSPPFMELTSLCGED
 TMRLLLEQNGLAFPFICKTRVAHGNTNSHEMAIVFNQEGLNAIQPPCVVQNF INHNAVLYKVFVVGESYTVV
 QRPSLKNFSAGTSDRESIFFNSHNVSKPESSSVLTEDKIEGVFERPSDEVIRELSRALRQALGVSLFGI
 DIIINNQTGQHAVIDVNAFPGYEGVSEFFD LLLNHIATV LQGQSTGGAATEEVAPLRHNRLLAEPAGSLA
 GERTCSASPGCCGSMKGQDTPWKTE T EAGNMGAGASAKLPHQRLGCTTGVSFQQHCVASLATKASSQ

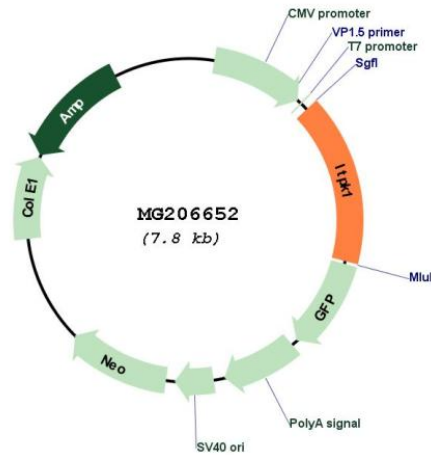
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_172584

ORF Size:	1257 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:	<ol style="list-style-type: none">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_172584.3
RefSeq Size:	2858 bp
RefSeq ORF:	1260 bp
Locus ID:	217837
UniProt ID:	Q8BYN3
Cytogenetics:	12 E
Gene Summary:	Kinase that can phosphorylate various inositol polyphosphate such as Ins(3,4,5,6)P4 or Ins(1,3,4)P3. Phosphorylates Ins(3,4,5,6)P4 at position 1 to form Ins(1,3,4,5,6)P5. This reaction is thought to have regulatory importance, since Ins(3,4,5,6)P4 is an inhibitor of plasma membrane Ca(2+)-activated Cl(-) channels, while Ins(1,3,4,5,6)P5 is not. Also phosphorylates Ins(1,3,4)P3 on O-5 and O-6 to form Ins(1,3,4,6)P4, an essential molecule in the hexakisphosphate (InsP6) pathway. Also acts as an inositol polyphosphate phosphatase that dephosphorylate Ins(1,3,4,5)P4 and Ins(1,3,4,6)P4 to Ins(1,3,4)P3, and Ins(1,3,4,5,6)P5 to Ins(3,4,5,6)P4. May also act as an isomerase that interconverts the inositol tetrakisphosphate isomers Ins(1,3,4,5)P4 and Ins(1,3,4,6)P4 in the presence of ADP and magnesium. Probably acts as the rate-limiting enzyme of the InsP6 pathway. Modifies TNF-alpha-induced apoptosis by interfering with the activation of TNFRSF1A-associated death domain (By similarity). Plays an important role in MLKL-mediated necroptosis. Produces highly phosphorylated inositol phosphates such as inositolhexakisphosphate (InsP6) which bind to MLKL mediating the release of an N-terminal auto-inhibitory region leading to its activation. Essential for activated phospho-MLKL to oligomerize and localize to the cell membrane during necroptosis (By similarity).[UniProtKB/Swiss-Prot Function]