

Product datasheet for MR206652

Itpk1 (NM_172584) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Itpk1 (NM_172584) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Itpk1
Synonyms:	BC031182
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR206652 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCAGACCTTCTGAAAGGGAAGAGAGTTGGCTACTGGCTGAGCGAGAAGAAAGTCAAGAAGCTCAATT
TCCAGGCCTTCGCGGAGCTGTGCAGGAAGCGAGGGATAGAAGTCGTGCAGCTGAACCTCAGCAGACCGAT
TGAGGAGCAGGGCCCCCTGGACGTCATCATCCACAAGTGACCGATGTCATCCTCGAGGCAGACCAGAAT
GACAGCCAGTCCCTGGAATTGGTGCACAGGTTCCAAGAGTACATCGATGCTCACCTGAGACCATCGTCT
TGGATCCCTCCCGCCATCAGGACCCTGTTAGACCGTTCCAAGTCTACGAACCTATCCGAAAGATCGA
GGCTACATGAAAGATGACAGAATCTGCTCGCCGCTTTCATGGAGCTCAGGAGCCTGTGTGGGGAGGAC
ACCATGAGGCTGTGGAGCAGAACGGCCTGGCCTTCCCCTTCATTTGCAAACCAGAGTGGCTCATGGAA
CCAACCTCATGAGATGGCTATTGTGTTCAACCAAGAGGGCCTGAATGCCATCCAGCCTCCCTGTGTGGT
CCAGAACTTCAACCAACAATGCTGTCTGTACAAGGTGTTGTGGTGGGCGAGTCTACACAGTGGTC
CAGAGACCCTCACTCAAGAACTTCTGCGGGCACATCAGATCGTGAGTCCATCTTCTTCAACAGCCACA
ATGTGTCAAAGCCGGAGTCTTATCAGTCTCTACTGAGCTGGACAAGATCGAGGGTGTGTTCGAACGGCC
AAGCGATGAGGTTATCCGGGAGCTGTCCCGGCTCTGCGGAGGCGTGGGAGTGTCACTGTTTGGAAAT
GACATCATTAACAACAGACCGGGCAGCATGCAGTATCGATGTCATGCAATGCCTCCAGGCTATGAAG
GAGTGAGTGAGTTCTTTACCGACCTCTGAACCACATTGCCACAGTTCTGCAAGGCCAGAGCACGGGAGG
AGCTGCCACGGAGGAAGTGGCCCGCTAAGGCACAACAGGCTCCTGGCGAACCAGGACAGCCTGGCT
GGGGAGCGGACGTGCAAGTGCAGCCCTGGCTGCTGTGGCAGCATGAAGGGCCAGGACACACCCTGGAAGA
CTGAGACCGAAGCAGGCAACATGGGCGTGGTCTCCGCCAAGCTGCCGACAGAGACTTGGCTGCAC
CACTGGCGTATCACCCAGCTTCCAGCAGCACTGTGTGGCCTCTCTGGCCACCAAGGCTTCTCACAG

ACGGTACGGCGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >MR206652 protein sequence
 Red=Cloning site Green=Tags(s)

MQTFLKGRVGYWLSEKKVKKLNFAELCRKRGIEVVQLNLSRPIEEQGPLDVIHKLTDVILEADQN
 DSQSLELVHRFQEYIDAHPETIVLDPLPAIRTLDRSKSYELIRKIEAYMKDDRICSPFMELTSLCGED
 TMRLLEQNGLAFPFICKTRVAHGNTSHEMAIVFNQEGLNAIQPPCVVQNFINHNAVLYKVFVVGESYTVV
 QRPSLKNFSAGTSDRESIFFNHNVSKEPSSSVLTEDKIEGVFERPSDEVIRELSRALRQALGVSLFGI
 DIIINNQTGQHAVIDVNAFPGYEGVSEFFDLLNHIATVLQGGSTGGAATEEVAPLRHNRLLAEPAGSLA
 GERTCSASPGCCGSMKGQDTPWKTEAGNMGAGASAKLPHQRLGCTTGVSFQHCVASLATKASSQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_172584

ORF Size: 1260 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_172584.3](#)

RefSeq Size: 2856 bp

RefSeq ORF: 1260 bp

Locus ID: 217837

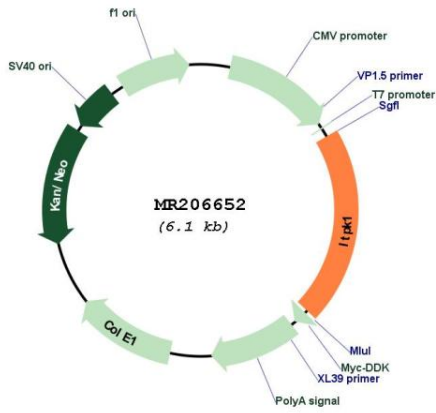
UniProt ID: [Q8BYN3](#)

Cytogenetics: 12 E

MW: 46.1 kDa

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 dephosphorylates 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]

Product images:



Circular map for MR206652