

Product datasheet for **MR211042**

Kpnb1 (NM_008379) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Kpnb1 (NM_008379) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Kpnb1
Synonyms:	AA409963; Impnb; IPOB
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>MR211042 representing NM_008379
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGAGCTCATAACCATCCTCGAGAAGACCGTGTCTCCGGATCGGCTGGAGCTGGAAGCGGCCGAGAAGT
 TCCTCGAGCGTGC GGCCGTGGAGAATCTGCCACAGTTCCTTGTGGAAGTGTCCAGAGTGTGCAAAACCC
 AGGAAACAGTCAGGTTGCCAGAGTTGCAGCTGGTCTACAAATTAAGAACTCTTTGACATCGAAAAGATCCA
 GATATCAAGGCACAATACCAGCAGAGGTGGCTCGCTATTGATGCTAATGCTCGACGGGAAGTCAAGAACT
 ATGTTTTGCAGACGTTGGGCACAGAAACGTACCGGCTAGTTCGGCTCACAGTGTGTGGCTGGTATTGC
 TTGTGCAGAGATCCAGTAAGCCAGTGGCCAGAGCTAATTCCTCAGCTGGTAGCCAATGTCACAAAACCC
 AACAGCACAGAGCATATGAAAGAGTCCACATTGGAAGCTATTGGTTACATTTGCCAAGATATAGACCCAG
 AGCAGCTACAGGATAAGTCCAATGAGATCCTGACTGCCATAATCCAGGGGATGAGGAAGGAGGAGCCTAG
 TAACAATGTGAAGCTGGCTGCTACCAATGCACTCCTGAACTCACTAGAGTTCACCAAAGCAAACCTTTGAC
 AAAGAGTCTGAAAGGCACTTTATCATGCAAGTGGTCTGTGAAGCCACACAGTGTCCAGACACAAGGGTAA
 GAGTGGCTGCTTACAGAATCTAGTGAAGATAATGTCCTTGTATTACCAGTACATGGAGACATACATGGG
 TCCTGCCCTTTTTGCAATCACAATTGAAGCAATGAAAAGTACATTGATGAGGTGGCTCTCCAAGGGATA
 GAGTTCGGTCCAATGTCTGTGATGAGGAAATGGATTTGGCCATTGAGGCTTCAGAGGCAGCAGAGCAAG
 GACGCCCCCGGAGCACACCAGCAAATTTACGCCAAGGGAGCACTGCAGTACTTGGTGGCCATCCTCAC
 ACAGACTGACTAAACAGGATGAAAACGATGACGACGATGACTGGAACCTTGC AAAGCAGCTGGGGTG
 TGCCCTATGCTCCTGTCCACCTGCTGTGAAGATGACATTGTGCCGATGTCTTCCCTTTATTAAGAGC
 ACATCAAGAACCCTGACTGGCGATACCGGGATGCAGCAGTGGCTTTTGGCAGTATCTTGAAGAGC
 AGAGCCTAATCAACTGAAACCATTAGTCATACAGGCTATGCCACCCCTAATAGAACTAATGAAAGACCCC
 AGTGTAGTTGTCGAGACACAACAGCGTGGACTGTGGCAGGATCTGTGAGCTGTGCCTGAAGCCGCCA
 TCAACGATGTCTACCTGGCACCCCTTTTACAGTGTCTGATTGAGGGCCTCAGTGTGAGCCAGGGTGGC
 TTCAAATGTGTGCTGGGCTTTTTCCAGTCTGGCTGAAGCTGCGTATGAAGCTGCAGATGTAGCTGATGAT
 CAAGAAGAACCAGCCACCTATTGTCTGTCTTCTCCTTTGAACTTATAGTTCAGAAGCTATTGGAGACCA
 CCGACAGACCCGATGGACACCAGAATAACCTGAGAAGCTCTGCGTATGAGTCTCTCATGGAATCGTAAA
 GAACAGTGCCAAGGATTGTTACCCTGCCGTGCAGAAGACCACCCTGGTCAATATGGAACGGCTGCAGCAG
 GTGCTTCAGATGGAGTCCATATCCAGAGCACATCCGACAGAATCCAGTTC AATGACCTCCAGTCTCTAC
 TCTGCGGACTCTCAGAATGTTCTCCGAAAGTGCAGCATCAAGATGCTCTGCAGATCTCTGATGTGGT
 CATGGCCTCCCTGTTAAGGATGTTCAAAGCACAGCTGGGTCTGGGGGAGTGCAAGAAGATGCCCTGATG
 GCAGTTAGCACACTGGTGGAAAGTGTGGGTGGTGAATTCCTCAAGTACATGGAGGCCTTTAAACCATTCC
 TGGGCAATTGGACTGAAAATTAATGCTGAGTACCAGGATGTTTGGCAGCTGTTGGCTTAGTTGGAGACTT
 GTGCCGAGCCCTGCAGTCTAACATCTTGCCCTTCTGTGACGAGGTGATGCAGCTGCTCCTGGAGAACTTG
 GGAATGAGAATGTCCACAGGTCTGTGAAGCCACAGATTCTGTCTGTGTTGGTGATATTGCTCTTGCCA
 TTGGTGGAGAGTTTAAAAAATACTTAGAGTTGTATTGAATACTCTACAGCAGGCCTCCCAAGCCAGGT
 TGACAAGTCAGACTTTGACATGGTGGATTATCTGAATGAGCTAAGAGAAAGCTGCTTGAAGCTTATACG
 GGAATCGTCCAGGATTGAAGGAGATCAGGAAAACGTACACCCGGATGTAATGCTGGTACAGCCAGAG
 TAGAATTTATTTTGTCTTTTATTGATCACATTGCTGGAGATGAGGATCATACGGACGGAGTGGTAGCCTG
 TGCTGCTGGTCTGATAGGGGACTTGTGTACAGCCTTCGGGAAGGATGACTGAAGTTAGTAGAAGCTAGG
 CCAATGATCCAATGAACTATTAAGTGAAGGGCGGAGATCGAAGACTAACAAAGCAAAGACCCTCGCTACGT
 GGGCAACCAAGGAACTGAGGAACTGAAGAACCAGGCT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR211042 representing NM_008379
Red=Cloning site Green=Tags(s)

MELITILEKTVSPDRLELEAAQKFLERAAVENLPTFLVELSRVLANPGNSQVARVAAGLQIKNSLTSKDP
 DIKAQYQQRWLAIDANARREVKNYVLQTLGTETYPSSASQCVAGIACAEIPVSQWPELIPQLVANVTNP
 NSTEHMKESTLEAIGYICQDIDPEQLQDKSNEILTAI IQGMRKEEPSNNVLAATNALLNSLEFTKANFD
 KESERHFIMQVVCEATQCPDTRVRVAALQNLVKIMSLYQYMETYMGPALFAITIEAMKSDIDEVALQGI
 EFWSNVCD EMDLAEASEAAEQGRPPEHTSKFYAKGALQYLVPILTQTLTKQDENDDDDWNPCKAAGV
 CLMLLSTCCEDD IVPVLPFIKEHIKPNPWRYRDAAVMAFGSILEGPEPNQKPLVIQAMPTLIELMKDP
 SVVVRD TAWTVGRICELLPEAAINDVYLAPLLQCLIEGLSAEPRVASNVCWAFSSLAEEAAYEADVADD
 QEEPATYCLSSSFELIVQKLETTDRPDGHQNNLRSSAYESLMEIVKNSAKDCYPAVQKTTLVIMERLQQ
 VLQMESHIQSTSDRIQFNDLQSLLCATLQNVLRKVQH QDALQISDVVMASLLRMFQSTAGSGGVQEDALM
 AVSTLVEVLGGF LKYMFAFKPFLGIGLKNYAEYQVCLAAVGLVGDLCRALQSNILPFCDEVMQLLENL
 GNENVHRSVKPQILSVFGDIALAIGGEFKKYLEVVLNTLQQASQAQVDKSDFDMDVDYLNELRESCLEAYT
 GIVQGLKGDQENVHPDVMLVQPRVEF ILSFIDHIAGDEDHTDGVVACAAGLIGDLCTAFGKDV LKLYEAR
 PMIHELLTEGRRSKTNKAKTLATWATKELRKLKNQA

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mm9047_h11.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:

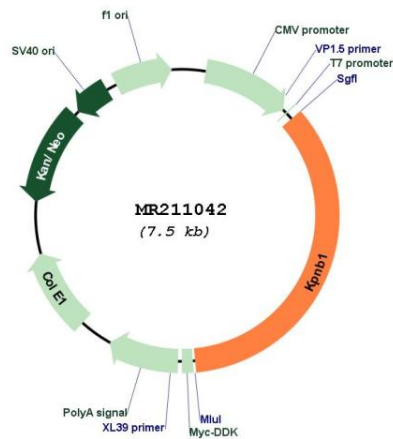


* The last codon before the Stop codon of the ORF

ACCN:	NM_008379
ORF Size:	2628 bp
OTI Disclaimer:	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>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</p>
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_008379.3 , NP_032405.3
RefSeq Size:	5909 bp
RefSeq ORF:	2631 bp
Locus ID:	16211
UniProt ID:	P70168
Cytogenetics:	11 D
MW:	97.6 kDa

Gene Summary:

Functions in nuclear protein import, either in association with an adapter protein, like an importin-alpha subunit, which binds to nuclear localization signals (NLS) in cargo substrates, or by acting as autonomous nuclear transport receptor. Acting autonomously, serves itself as NLS receptor. Docking of the importin/substrate complex to the nuclear pore complex (NPC) is mediated by KPNB1 through binding to nucleoporin FxFG repeats and the complex is subsequently translocated through the pore by an energy requiring, Ran-dependent mechanism. At the nucleoplasmic side of the NPC, Ran binds to importin-beta and the three components separate and importin-alpha and -beta are re-exported from the nucleus to the cytoplasm where GTP hydrolysis releases Ran from importin. The directionality of nuclear import is thought to be conferred by an asymmetric distribution of the GTP- and GDP-bound forms of Ran between the cytoplasm and nucleus. Mediates autonomously the nuclear import of ribosomal proteins RPL23A, RPS7 and RPL5. Binds to a beta-like import receptor binding (BIB) domain of RPL23A. In association with IPO7 mediates the nuclear import of H1 histone. In vitro, mediates nuclear import of H2A, H2B, H3 and H4 histones. Imports SNAI1 and PRKCI into the nucleus (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:


Circular map for MR211042