

Product datasheet for **SC118719**

KPNB1 (NM_002265) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	KPNB1 (NM_002265) Human Untagged Clone
Tag:	Tag Free
Symbol:	KPNB1
Synonyms:	IMB1; Impnb; IPO1; IPOB; NTF97
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF:

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>OriGene sequence for NM_002265 edited
CCAACCCCATCCCCAGTTCGAGCCGCCGCCGAAAGGCCGGCCGTCGTCTTAGGAGGA
GTCGCCGCCGCCACCTCCGCCATGGAGCTGATCACCATTCTCGAGAAGACCGTGTCT
CCCCATCGGCTGGAGCTGGAAGCGGCCAGAAAGTTCTGGAGCGTGGCCCGTGGAGAAC
CTGCCACTTTCTTGTGGAAGTGTCCAGAGTGTGGCAAATCCAGGAAACAGTCAGGTT
GCCAGAGTTGCAGCTGGTCTACAATCAAGAACTCTTTGACATCTAAAGATCCAGATATC
AAGGCACAATATCAGCAGAGGTGGCTTGTATTGATGCTAATGCTCGACGAGAAGTCAAG
AACTATGTTTTGCAGACATTGGGTACAGAACTTACCGGCTAGTTCTGCCTCACAGTGT
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CTGGTGGCAATGTCACAAACCCCAACAGCACAGAGCACATGAAGGAGTCGACATTGGAA
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GCTGCTACGAATGCACTCCTGAACCTATTGGAGTTCACCAAAGCAAACCTTGATAAAGAG
TCTGAAAGGCACTTTATTATGCAGGTGGTCTGTGAAGCCACACAGTGTCCAGATACGAGG
GTACGAGTGGCTGCTTTACAGAATCTGGTGAAGATAATGCCTTATATTACAGTACATG
GAGACATATATGGGTCCCTGCTCTTTTTGCAATCACAATCGAAGCAATGAAAAGTGACATT
GATGAGGTGGCTTTACAAGGGATAGAATTCTGGTCCAATGCTGTGTGATGAGGAAATGGAT
TTGGCCATTGAAGCTTCAGAGGCAGCAGAAACAAGGACGGCCCCCTGAGCACACCAGCAAG
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CAGGACGAAAAATGATGATGACGATGACTGGAACCCCTGCAAAGCAGCAGGGGTGTGCCTC
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GAACACATCAAGAACCAGATTGGCGGTACCGGGATGCAGCAGTGTGGCTTTTGGTTGT
ATCTTGGAAGGACCAGAGCCCAAGTCAAGTCAAAACCACTAGTTATACAGGCTATGCCACC
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CTACAGTGTCTGATTGAGGGTCTCAGTGTGAACCCAGAGTGGCTTCAAATGTGTGCTGG
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ACTACAGACAGACCTGATGGACACCAGAACACCTGAGGAGTTTGCATATGAATCTCTG
ATGGAAATTTGAAAAACAGTGCCAAGGATTGTTATCCTGCTGTCCAGAAAAACGACTTTG
GTCATCATGGAACGACTGCAACAGGTTCTTCAGATGGAGTACATATCCAGAGCACATCC
GATAGAATCCAGTTCAATGACCTTCAGTCTTTACTCTGTGCAACTCTTCAGAATGTTCTT
CGGAAAGTGCAACATCAAGATGCTTTGCAGATCTCTGATGTGGTTATGGCCTCCCTGTTA
AGGATGTTCAAAGCACAGCTGGGTCTGGGGGAGTACAAGAGGATGCCCTGATGGCAGTT
AGCACACTGGTGGAAAGTGTGGGTGGTGAATTCCTCAAGTACATGGAGGCCTTTAAACCC
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TTAGTGGGAGACTTGTGCCGTGCCCTGCAATCCAACATCATACCTTTCTGTGACGAGGTG
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GTCCAGGGATTAAGGGGGATCAGGAGAAGCTACACCCGGATGTGATGCTGGTACAACCC
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GGAGTAGTAGCTTGTGCTGCTGGACTAATAGGGGACTTATGTACAGCATTGGGAAGGAT
GTACTGAAATTAGTAGAAGCTAGGCCAATGATCCATGAATTGTTAACTGAAGGGCGGAGA
TCGAAGACTAACAAAGCAAAAACCTTGCTACATGGGCAACAAAAGAACTGAGGAAACTG
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GAGAGGATGAGTGAAGGCTTAAAAACACACCACATTGAAAATCCTGCCACAGCAGCA
GCCGCAGCCGCCAACAGCAGCGCTGTTAGTGAGCTAAGTAAGCACTGACTTCGTAGAAAA
CCATAACATCGGCCATCTTGAAAAGAGAAAAACAATGGAGTTACTTATTTAAAAA
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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_002265 unedited
 GGGCACTATTTGTATACGACTCCTATAGGCGGCCGCGNAATTCGCACGAGGCCAACCCCC
 ATCCCCAGTTCGAGCCGCCGCCGAAGGCCGGCCGCTCGTCTTAGGAGGAGTCGCCGCCG
 CCGCCACCTCCGCCATGGAGCTGATCACCATTCTCGAGAAGACCGTGTCTCCCGATCGGC
 TGGAGCTGGAAGCGGCCGAGAAGTTCTGGAGCGTGCGCCGTGGAGAACCTGCCCACTT
 TCCTTGTGGAACGTGCCAGAGTCTGGCAAATCCAGGAAACAGTCAGGTTGCCAGAGTTG
 CAGCTGGTCTACAAATCAAGAACTCTTTGACATCTAAAGATCCAGATATCAAGGCACAAT
 ATCAGCAGAGGTGGCTTGTATTGATGCTAATGCTCGACGAGAAGTCAAGAACTATGTTT
 TGCAGACATTGGGTACAGAACTTACCGCCTAGTTCTGCCTCACAGTGTGTGGCTGGTA
 TTGCTTGTGCAGAGATCCCAGTAAACCAGTGGCCAGAACTCATTCTCAGCTGGTGGCCA
 ATGTCACAAACCCCAACAGCACAGAGCACATGAAGGAGTCGACATTGGAAGCCATCGGTT
 ATATTTGCCAAGATATAGACCCAGAGCAGCTACAAGATAAATCCAATGAGATTCTGACTG
 CCATAATCCAGGGGATGAGGAAAGAAGAGCCTAGTAATAATGTGAAGCTAGCTGCTACGA
 ATGCACTCCTGAACTCATTGGAGTTCACCAAAGCANACTTTGNATAAGAGTCTGAAAGGC
 ACTNTATTATGCAGGTGGTCTGTGAAGCCACACAGTGTCCAGATACGAGGTACGAGTGG
 GCTGCTTACAGAACTCTGGTGAAGNATATGCTTATATTATCAGTACATGGAGACATATA
 TGGTCTCTGCTCTT

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_002265 unedited
 CCGCAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTTTTAAATAAGTAACTCCATTGTTTTTC
 TCTTTTCCAAGATGGCCGATGTTATGGTTTTCTACGAAGTCAGTGCTTACTTATCTCACT
 AACAGCGCTGCTGTTGGCGGCTGCGGCTGCTGCTGTGGCAGGATTTTCAATGTGGTGTGT
 TTTCAAGCCTCACTCACTCATCCTCTCATTCCCAAACATTCAGCATCCGTGCACACTCCT
 CACTTCCAGGTTTTTCAAAGATGGGAGATTTCCAGTGGGGGTCCTCAGGTTATCATCCC
 AATGGTAACAGATCAAGCTTGGTTCTTCAGTTTCTCAGTCTTTTTGTTGCCCATGTAGC
 AAGGGTTTTGCTTTGTTAGTCTTCGATCTCCGCCCTTCAGTTAACAATTCATGGATCAT
 TGGCCTAGCTTCTACTAATTTTCAGTACATCCTTCCCAAATGCTGTACATAAGTCCCCTAT
 TAGTCCAGCAGCACAAGCTACTACTCCATCTGTGTGATCCTCATCTCCAGCAATGTGGTC
 AATGAAAGACAGAATAAATCTACTCTGGGTTGTACCAGCATCACATCCGGGTGTACGTT
 CTCCTGATCCCCCTTTAATCCCTGGACGATTCCAGTATATGCCTCCAAGCAGCTNTCCCT
 TAGCTCATTAGATAAATCCACCATGTCATAGTCTGACTTGTCCACCTGGGCTAGGGAAGC
 CCGCTGAAAATTATTCAATACAACCCTCTAGTATTCTTTAACTCTCCTCAATAGCAAAGG
 CATCTCACAAACCCTGACAGAATCTGCGGCTTACAGACCTGTGGACGTTCTCATTCCC
 CAATTTTCAAAGCCACTGCTCACCCCTGCCAAAAGGTTAATGTTGATCGCAAGCCACG
 CCCAATCTTCCACTAACCCAGCTTGCAAAACAAACCGGATTCAATATATTTTTATTCCA
 TGCCACGAAGGGTTAAGACTCCCTGACTCGAGAATTCCCCCN

Restriction Sites:

NotI-NotI

ACCN:

NM_002265

Insert Size:

3180 bp

OTI Disclaimer: 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.

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 TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

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_002265.4](#), [NP_002256.2](#)

RefSeq Size: 4205 bp

RefSeq ORF: 2631 bp

Locus ID: 3837

UniProt ID: [Q14974](#)

Cytogenetics: 17q21.32

Domains: Armadillo_seg, IBN_NT

Protein Families: Druggable Genome, Stem cell - Pluripotency

Gene Summary:

Nucleocytoplasmic transport, a signal- and energy-dependent process, takes place through nuclear pore complexes embedded in the nuclear envelope. The import of proteins containing a nuclear localization signal (NLS) requires the NLS import receptor, a heterodimer of importin alpha and beta subunits also known as karyopherins. Importin alpha binds the NLS-containing cargo in the cytoplasm and importin beta docks the complex at the cytoplasmic side of the nuclear pore complex. In the presence of nucleoside triphosphates and the small GTP binding protein Ran, the complex moves into the nuclear pore complex and the importin subunits dissociate. Importin alpha enters the nucleoplasm with its passenger protein and importin beta remains at the pore. Interactions between importin beta and the FG repeats of nucleoporins are essential in translocation through the pore complex. The protein encoded by this gene is a member of the importin beta family. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Feb 2013]

Transcript Variant: This variant (1) represents the longer transcript and encodes the longer isoform (1). Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.