

## Product datasheet for **MR208487**

### **Kpna2 (NM\_010655) Mouse Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	Kpna2 (NM_010655) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Kpna2
Synonyms:	2410044B12Rik; IPOA1; PTAC58; Rch1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>MR208487 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGTCCACGAACGAGAATGCTAACTACCAGCTGCCCGACTTAACAGGTTCAAGAACAAGGGGAAGGACA  
 GCACAGAAATGCGTCGCCGCCGAATAGAAAGTTAATGTGGAAGCTCAGGAAAGCTAAAAAGATGAGCAGAT  
 GCTGAAAAGAAGAAACGTCAGCTCCTTTCTGATGATGCTACTTCTCCGTACAGGAAAACCGGAACAAC  
 CAGGGTACTGTAAATGGTCTGTGAGGACATTGTTAAAGGCATAAACAGTAACAATTTGGAAAGCCAGC  
 TCCAAGCTACTCAAGCTGCTCGGAAATTGCTTTCTAGAGAGAAACAGCCTCCTATAGACAACATCATCCG  
 GGCTGGTTTATCCAAAATTTGTGCTTCTTGGGCAAACTGATTGTAGTCTATTAGTTTGGTCT  
 GCTTGGGCACTACCAACATTGCTTCTGGAACATCTGAACAGACCAAGCTGTGGTGGATGGAGGTGCTA  
 TCCAGCGTTTATTTCTCTCTTGGCATCTCCTCATGCTCACATCAGCGAGCAAGCTGTTTGGGCTTTGG  
 AAACATTGCAGGTGATGGTTCAGCTTTCCGAGACTTAGTTATCAAACACGGTGCATTGACCCACTGTTG  
 GCACTTCTTGAGTTCGGATCTGTCTACCTTGGCATGTGGTTACTTACGTAATCTTACCTGGACGCTTT  
 CAAACCTTTGTCGAAAACAGAACCCTGCACCTCCCTTAGATGCCGTTGAGCAGATTCTTCTACGTTAGT  
 TCGACTCTGCACCACAATGATCCAGAAGTATTGGCAGATTCTGCTGGGCCATTTCTACCTGACTGAT  
 GGTCCAAATGAGCGCATTGAGATGGTTGTGAAGAAAGGAGTTGTTCCCAACTTGTGAAGCTTCTAGGAG  
 CTACTGAACTGCCATTGTGACTCCCGCACTAAGAGCCATAGGGAATATTGCTACTGGAACAGATGAGCA  
 GACTCAGAAAGTGATCGATGCAGGAGCACTTGCAGTCTTTCCAGCCTGCTAACAAACCCCAAACTAAT  
 ATTCAGAAGGAGGCCACATGGACAATGTGAACATTACAGTGGACGCCAGGACCAGATACAGCAAGTTG  
 TGAATCACGGCTAGTCCCTTTCTTGTGGTCTCTCTAAGGCGGACTTTAAGACACAGAAGGAGGC  
 CGCGTGGCTATAACCAACTATACCAGCGTGGGACTGTTGAGCAGATTGTGTATCTCGTCACTGTGGG  
 ATAATAGAACCTTTGATGAACCTCTGAGTGCAAAAGATACCAAGATTATTCAGGTTATTCTTGACGCCA  
 TTTCAAATATCTTTCAGGCTGCAGAGAACTAGGTGAGACAGAAAAGCTTAGTATAATGATTGAAGAGTG  
 TGGAGGCTTGGATAAAATTGAAGCACTACAGAGGCATGAAAACGAGTCTGTATACAAGGCCTCATTGAAC  
 TTAATTGAGAAGTACTTCTCAGTGGAGGAAGAGGAAGTCAAAATGTGGTGCCAGAACTACCTCTGAAG  
 GCTTCGCCTTCAAGTTCAGGATGGAGCTCCTGGGACCTTAACCTC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>MR208487 protein sequence  
 Red=Cloning site Green=Tags(s)

MSTNENANLPAARLNRFKKNKGKDSSTEMRRRRIEVNVELRKAKKDEQMLKRRNVSSFPDDATSPLQENRNN  
 QGTVNWSVEDIVKGINSNNLESQIQATQAARKLLSREKQPPIDNIRAGLIPKFVSFLGKTDSPFIQFES  
 AWALTNIASGTSEQTKAVVDGGAIPAFISLLASPHAHISEQAVWALGNIAGDGSFRDLVIKHGAIDPLL  
 ALLAVPDLSTLACGYLRNLTWLSNLCRNKNPAPPLDAVEQILPTLVRLHHNDPEVLADSCWAI SYLTD  
 GPNERIEMVVKKGVVPQLVKLLGATELPIVTPALRAIGNIVTGTDEQTQKVIDAGALAVFPSLLTNPKN  
 IQKEATWTMSNITAGRQDQIQVVNHGLVPFLVGVLSKADFKTQKEAAWAITNYTSGGTVEQIVYLVHCG  
 IIEPLMNLISAKDTKIIQVILDAISNIFQAAEKLGETEKL SIMIEECGLDKIEALQRHENESVYKASLN  
 LIEKYFSVEEEDQNVVPEITSEGFQVQDQDAPGTFNF

**TR**TRPLEQKLI SEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_010655

**ORF Size:** 1590 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\\_010655.1](#), [NM\\_010655.2](#), [NM\\_010655.3](#), [NP\\_034785.1](#)

**RefSeq Size:** 2071 bp

**RefSeq ORF:** 1590 bp

**Locus ID:** 16647

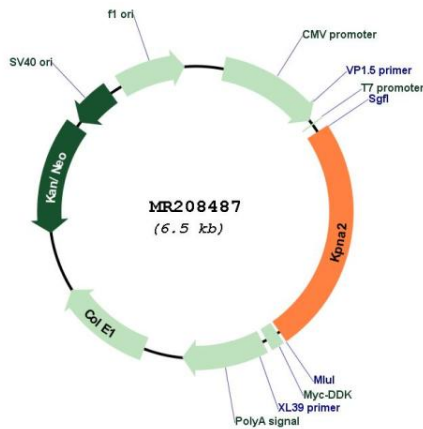
**UniProt ID:** [P52293](#)

**Cytogenetics:** 11 E1

**MW:** 57.9 kDa

**Gene Summary:** Functions in nuclear protein import as an adapter protein for nuclear receptor KPNB1. Binds specifically and directly to substrates containing either a simple or bipartite NLS motif. 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.[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for MR208487