

## Product datasheet for **RC208803**

### **KPNA2 (NM\_002266) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	KPNA2 (NM_002266) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	KPNA2
Synonyms:	IPOA1; QIP2; RCH1; SRP1-alpha; SRP1alpha
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC208803 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGTCCACCAACGAGAATGCTAATACACCAGCTGCCCGTCTTACAGATTCAAGAACAAGGGAAAAGACA  
 GTACAGAAATGAGGCGTCGAGAATAGAGGTCAATGTGGAGCTGAGGAAAGCTAAGAAGGATGACCAGAT  
 GCTGAAGAGGAGAAATGTAAGCTCATTTCTGATGATGCTACTTCTCCGCTGCAGGAAAACCGCAACAAC  
 CAGGGCACTGTAAATTGGTCTGTTGATGACATTGTCAAAGGCATAAATAGCAGCAATGTGGAAAATCAGC  
 TCCAAGCTACTCAAGCTGCCAGGAACTACTTTCCAGAGAAAAACAGCCCCCATAGACAACATAATCCG  
 GGCTGTTTATTCCGAAATTTGTGCTTCTTGGGCAGAACTGATTGTAGTCCCATTAGTTTGAATCT  
 GCTTGGGCACTACTAACATTGCTTCTGGGACATCAGAACAACCAAGGCTGTGGTAGATGGAGGTGCCA  
 TCCCAGCATTCAATTTCTGTTGGCATCTCCCATGCTCACATCAGTGAACAAGCTGTCTGGGCTTAGG  
 AAACATTGCAGGTGATGGCTCAGTGTCCGAGACTTGGTTATTAAGTACGGTGCAGTTGACCCACTGTTG  
 GCTCTCCTTGAGTTCCTGAGATGTCATCTTAGCATGTGGCTACTTACGTAATCTTACCTGGACACTTT  
 CTAATCTTTGCCCAACAAGAATCCTGCACCCCGATAGATGCTGTTGAGCAGATTCTTCTACCTTAGT  
 TCGGCTCTGCATCATGATGATCCAGAAGTGTAGCAGATACCTGCTGGGCTATTTCTACCTTACTGAT  
 GGTCCAAATGAACGAATTGGCATGGTGGTGAACAGGAGTTGTGCCCAACTTGTGAAGCTTCTAGGAG  
 CTTCTGAATTGCCAATTGTGACTCCTGCCCTAAGAGCCATAGGGAATATTGCTACTGGTACAGATGAACA  
 GACTCAGGTTGTGATTGATGCAGGAGCACTCGCCGTCTTCCAGCCTGCTCACCACCCCAAACTAAC  
 ATTCAGAAGGAAGCTACGTGGACAATGTCAAACATCACAGCCGGCCGAGGACCAGATACAGCAAGTTG  
 TGAATCATGGATTAGTCCATTCTTGTGAGTCTCTCTAAGGCAGATTTTAAGACACAAAAGGAAGC  
 TGTGTGGCCGTGACCAACTATACCAGTGGTGAACAGTTGAACAGATTGTGTACCTTGTCACTGTGGC  
 ATAATAGAACCCTGATGAACCTCTTAAGTGAACAAAGATACCAAGATTATTCTGTTATCTGGATGCCA  
 TTTCAAATATCTTTCAGGCTGCTGAGAACTAGGTGAAACTGAGAACTTAGTATAATGATTGAAGAATG  
 TGGAGGCTTAGACAAAATTGAAGCTCTACAAAACCATGAAAATGAGTCTGTGTATAAGGCTTCGTTAAGC  
 TTAATTGAGAAGTATTTCTGTAGAGGAAGAGGAAGTCAAACGTTGTACCAGAACTACCTCTGAAG  
 GCTACACTTTCCAAGTTCAGGATGGGGCTCCTGGGACCTTAACCTT

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC208803 protein sequence  
 Red=Cloning site Green=Tags(s)

MSTNENANTPAARLHRFKNKGKDSTEMRRRRIEVNVELRKAKKDDQMLKRRNVSSFPDDATSPLQENRNN  
 QGTVNWSVDDIVKGINSSNVENLQATQAARKLLSREKQPPIDNIRAGLIPKFSVFLGRTDCSPIQFES  
 AWALTNIASGTSEQTKAVVDGGAIPAFISLLASPHAHISEQAVWALGNIAGDGSVFRDLVIKYGAVDPLL  
 ALLAVPEMSSLACGYLRNLTWLTLNLNCRKNPAPPIDAVEQILPTLVRLHHDDPEVLADTCWAI SYLTD  
 GPNERIGMVVKTGVVPQLVKLLGASELPVTPALRAIGNIVTGTDEQTQVVIDAGALAVFPSLLTNPKN  
 IQKEATWTMSNITAGRQDQIQVNVHGLVPFLVSVL SKADFKTQKEAVWAVTNYTSGGTVEQIVYLVHCG  
 IIEPLMNLITAKDTKIILVILDAISNIFQAAEKLGETEKL SIMIEECGLDKIEALQNHENESVYKASLS  
 LIEKYFSVEEEDQNVVPETTSEGYYTFVQVDGAPGTFNF

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6092\\_a04.zip](https://cdn.origene.com/chromatograms/mk6092_a04.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_002266

**ORF Size:** 1587 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\\_002266.4](#)

**RefSeq Size:** 2011 bp

**RefSeq ORF:** 1590 bp

**Locus ID:** 3838

**UniProt ID:** [P52292](#)

**Cytogenetics:** 17q24.2

**Domains:** Armadillo\_seg, IBB

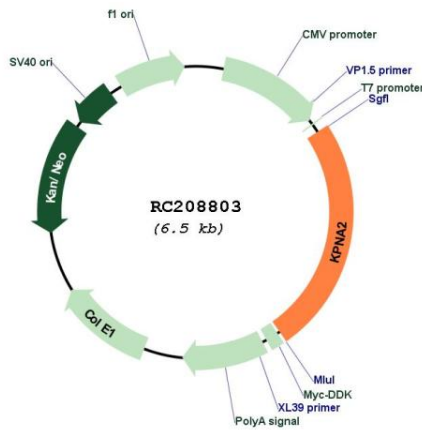
**Protein Families:** Druggable Genome, Stem cell - Pluripotency

**MW:** 57.9 kDa

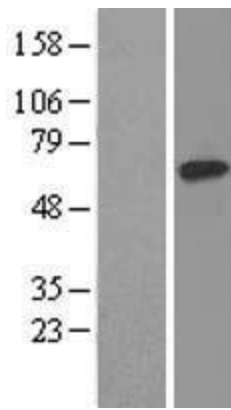
**Gene Summary:**

The import of proteins into the nucleus is a process that involves at least 2 steps. The first is an energy-independent docking of the protein to the nuclear envelope and the second is an energy-dependent translocation through the nuclear pore complex. Imported proteins require a nuclear localization sequence (NLS) which generally consists of a short region of basic amino acids or 2 such regions spaced about 10 amino acids apart. Proteins involved in the first step of nuclear import have been identified in different systems. These include the *Xenopus* protein importin and its yeast homolog, SRP1 (a suppressor of certain temperature-sensitive mutations of RNA polymerase I in *Saccharomyces cerevisiae*), which bind to the NLS. KPNA2 protein interacts with the NLSs of DNA helicase Q1 and SV40 T antigen and may be involved in the nuclear transport of proteins. KPNA2 also may play a role in V(D)J recombination. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Feb 2016]

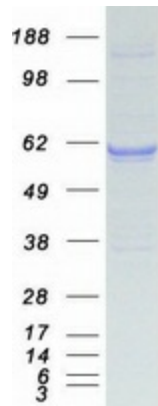
**Product images:**



Circular map for RC208803



Western blot validation of overexpression lysate (Cat# [LY419418]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC208803 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified KPNA2 protein (Cat# [TP308803]). The protein was produced from HEK293T cells transfected with KPNA2 cDNA clone (Cat# RC208803) using MegaTran 2.0 (Cat# [TT210002]).