

Product datasheet for **RG208803**

KPNA2 (NM_002266) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	KPNA2 (NM_002266) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	KPNA2
Synonyms:	IPOA1; QIP2; RCH1; SRP1-alpha; SRP1alpha
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG208803 representing NM_002266
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTCCACCAACGAGAATGCTAATACACCAGCTGCCCGTCTTCACAGATTCAAGAACAAGGGAAAAGACA
 GTACAGAAATGAGGCGTCGCAGAATAGAGGTCAATGTGGAGCTGAGGAAAGCTAAGAAGGATGACCAGAT
 GCTGAAGAGGAGAAATGTAAGCTCATTTCTGATGATGCTACTTCTCCGCTGCAGGAAAACCGCAACAAC
 CAGGGCACTGTAAATTGGTCTGTTGATGACATTGTCAAAGGCATAAATAGCAGCAATGTGGAAAATCAGC
 TCCAAGCTACTCAAGCTGCCAGGAACTACTTTCCAGAGAAAAACAGCCCCCATAGACAACATAATCCG
 GGCTGTTTATTCCGAAATTTGTGCTTCTTGGGCAGAACTGATTGTAGTCCCATTAGTTTGAATCT
 GCTTGGGCACTACTAACATTGCTTCTGGGACATCAGAACAACCAAGGCTGTGGTAGATGGAGGTGCCA
 TCCAGCATTCAATTTCTGTTGGCATCTCCCATGCTCACATCAGTGAACAAGCTGTCTGGGCTTAGG
 AAACATTGCAGGTGATGGCTCAGTGTCCGAGACTTGGTTATTAAGTACGGTGCAGTTGACCCACTGTTG
 GCTCTCCTTGCACTTCTGAGATGTCATCTTAGCATGTGGCTACTTACGTAATCTTACCTGGACACTTT
 CTAATCTTTGCCCAACAAGAATCCTGCACCCCGATAGATGCTGTTGAGCAGATTCTTCTACCTTAGT
 TCGGCTCTGCATCATGATGATCCAGAAGTGTAGCAGATACCTGCTGGGCTATTTCTACCTTACTGAT
 GGTCCAAATGAACGAATTGGCATGGTGGTGAACACAGGAGTTGTGCCCAACTTGTGAAGCTTCTAGGAG
 CTTCTGAATTGCCAATTGTGACTCCTGCCTAAGAGCCATAGGGAATATTGCTACTGGTACAGATGAACA
 GACTCAGGTTGTGATTGATGCAGGAGCACTCGCGTCTTTCCAGCCTGCTCACCACCCCAAACTAAC
 ATTCAGAAGGAAGCTACGTGGACAATGTCAAACATCACAGCCGGCCGAGGACCAGATACAGCAAGTTG
 TGAATCATGGATTAGTCCCATTTCTGTCAGTGTCTCTCTAAGGCAGATTTTAAGACACAAAAGGAAGC
 TGTGTGGCCGTCACCAACTATACCACTGAGTGGTGAACAGTTGAACAGATTGTGTACCTTGTCACTGTGGC
 ATAATAGAACCCTGATGAACCTCTTAAGTGAACAAAGATACCAAGATTATTCTGTTATCTGGATGCCA
 TTTCAAATATCTTTCAGGCTGCTGAGAACTAGGTGAAACTGAGAACTTAGTATAATGATTGAAGAATG
 TGGAGGCTTAGACAAAATTGAAGCTCTACAAAACCATGAAATGAGTCTGTGTATAAGGCTTCGTTAAGC
 TTAATTGAGAAGTATTTCTGTAGAGGAAGAGGAAGTCAAACGTTGTACCAGAACTACCTCTGAAG
 GCTACACTTTCCAAGTTCAGGATGGGGCTCCTGGGACCTTAACCTT

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG208803 representing NM_002266
 Red=Cloning site Green=Tags(s)

MSTNENANTPAARLHRFKNKGDSTEMRRRRIEVNVELRKAKKDDQMLKRRNVSSFPDDATSPLENRNN
 QGTVNWSVDDIVKGINSSNVENQLQATQAARKLLSREKQPPIDNIIRAGLIPKFSVFLGRTDCSPIQFES
 AWALTNIASGTSEQTKAVVDGGAIPAFISLLASPHAHISEQAVWALGNIAGDGSVFRDLVIKYGAVDPLL
 ALLAVPEMSSLACGYLRNLTWLSNLCRKNPAPPIDAVEQILPTLVRLHDDPEVLADTCWAI SYLTD
 GPNERIGMVVKTGVVPQLVKLLGASELPVTPALRAIGNIVTGTDEQTQVVIDAGALAVFPSLLTNPKTN
 IQKEATWTMSNITAGRQDQIQVVNHLVPFLVSVLSKADFKTQKEAVWAVTNYTSGGTVEQIVVYLHVC
 GIIIEPLMNLITAKDTKIIILVILDAISNIFQAAEKLGETEKL SIMIEECGLDKIEALQNHENESVYKASLS
 LIEKYFSVEEEDQNVVPETTSEGYTFQVQDGPATGTFNF

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-MluI

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_002266.2](#), [NP_002257.1](#)

RefSeq Size: 2011 bp

RefSeq ORF: 1590 bp

Locus ID: 3838

UniProt ID: [P52292](#)

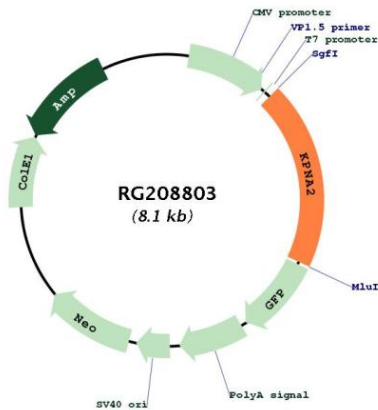
Cytogenetics: 17q24.2

Domains: Armadillo_seg, IBB

Protein Families: Druggable Genome, Stem cell - Pluripotency

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 RG208803