

## Product datasheet for RC207221

### Karyopherin beta 3 (IPO5) (NM\_002271) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Karyopherin beta 3 (IPO5) (NM_002271) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Karyopherin beta 3
Synonyms:	IMB3; imp5; KPNB3; Pse1; RANBP5
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC207221 representing NM_002271 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCTGAGGATCAAGTTGGAAACTAGAAGCAACAGAAAACACAATAAGCGCAATGGCGGCGGCCGCGG  
CGGAGCAGCAACAGTTCTACCTGCTCCTGGAAACCTGCTCAGCCCCGACAATGTGGTCCGGAAACAGGC  
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TGTCCTCAAGTCACTACTTATTCCATACTTGGATAATTTGGTGAACATCTGCATTCCATTATGGTACTGA  
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**Protein Sequence:**

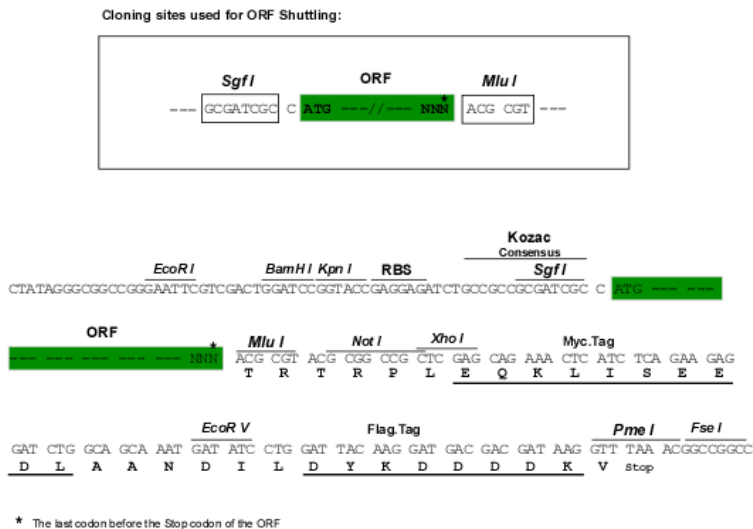
>RC207221 representing NM\_002271  
 Red=Cloning site Green=Tags(s)

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 TNLPKIFSIIEGEMHEAIKHEDPCAKRLANVVRVQVTSGLLWTECIAQLSPEQQAAIQELLNSA

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM\_002271

ORF Size: 3345 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\\_002271.4](#), [NP\\_002262.3](#)

RefSeq Size: 6019 bp

RefSeq ORF: 3294 bp

Locus ID: 3843

UniProt ID: [O00410](#)

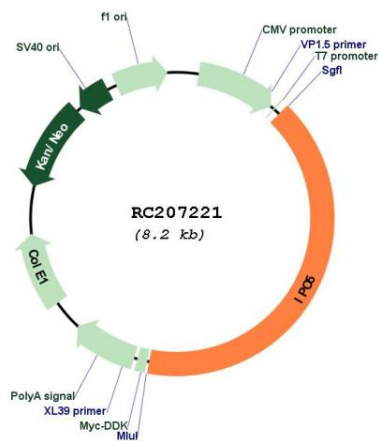
**Cytogenetics:** 13q32.2

**Protein Families:** Druggable Genome

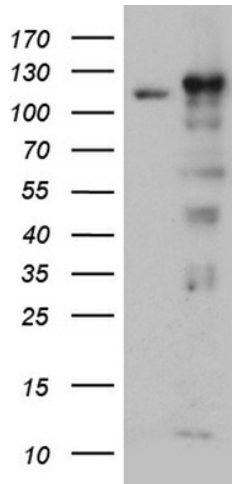
**MW:** 125.4 kDa

**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. [provided by RefSeq, Jul 2008]

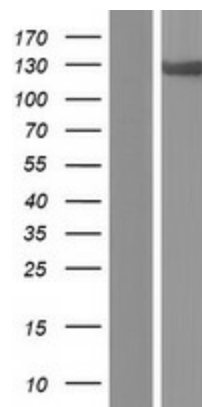
**Product images:**



Circular map for RC207221



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY IPO5 (Cat# RC207221, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-IPO5 (Cat# [TA811928]). Positive lysates [LY419423] (100ug) and [LC419423] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY419423]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207221 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).