

## Product datasheet for **RG207221**

### 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:	TurboGFP
Symbol:	IPO5
Synonyms:	IMB3; imp5; KPNB3; Pse1; RANBP5
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG207221 representing NM_002271 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCTGAGGATCAAGTTGGAAACTAGAAGCAACAGAAAACACAATAAGCGCAATGGCGGCGGCCGCGG  
CGGAGCAGCAACAGTTCTACCTGCTCCTGGAAACCTGCTCAGCCCCGACAATGTGGTCCGGAAACAGGC  
AGAGGAAACCTATGAGAATATCCAGGCCAGTCAAAGATCACATTCCTCTACAAGCCATCAGAAATACA  
ACAGCTGCTGAAGAGGCTAGACAAATGGCCGCCGTTCTCCTAAGACGTCTCTTGCTCTGCATTTGATG  
AAGTCTATCCAGCACTTCCTCTGATGTTGACTGATCAAGAGTGAGCTACTCATGATTATTCAGAT  
GGAACACAATCTAGCATGAGGAAAAAGTTTGTGATATTGCGGCAGAACTGGCCAGGAATTAATAGAT  
GAGGATGGCAATAACAGTGGCCCGAAGGTTTGAAGTTCCTTTTGGTTCAGTCACTCTCAAAATGTGG  
GACTGCGGGAAGCTGCCCTTACATTTTCTGGAATTTCTGGAATTTTGGGAACCAGCAACAACACTA  
TTAGATGTATCAAAACGAATGTTAGTTCAGTGTATGCAAGATCAGGAACACCCGTCGATCAGGACGTTA  
TCTGCTAGAGCTACAGCTGCATTTATACTTGAATGAGCATAATGTTGCTCTGTTCAAACATTTTGCAG  
ACTTGCTACCGGATTCCTACAGGCGGTAATGACTCGTGCTACCAGAATGATGATTCTGTCTCTAAATC  
CCTCGTTGAGATTGCAGATACTGTTCCAAAGTATTTGCGTCTCCTTGAAGCAACTCTACAGCTAAGT  
CTAAAGTTGTGGAGACTAGCCTCAACAATATGCAACGCCAGCTTGCCTTGAAGTATCGTCACCC  
TCTCTGAGACTGCAGCTGCTATGTTAAGAAAACATACCAATATTGTTGCACAGACTATTCCTCAGATGTT  
AGCAATGATGGTTGATTTGGAAGAAGATGAGGACTGGGCAAAATGCAGATGAACTAGAAGATGATGATTTT  
GACAGCAATGCAGTTGCAGGCGAGAGTGCTCTAGATCGAATGGCTTGGGACTTGGTGGAAAGCTCGTTC  
TGCCGATGATCAAGGAACACATTATGCAATGCTTCAAATCCTGACTGGAAATACCGGCATGCAGGATT  
GATGGCCTTATCTGCCATTGGTGAAGGGTCCACCAGCAAATGGAAGGAATTCAAATGAGATCGTAAAT  
TTTGTCTTACTTTTTCTCCAGGATCCTCATCCAAGAGTAAAGTATGCAGCCTGTAATGCCGTGGGACAGA  
TGGCTACAGATTTTGCACCTGGTTTCCAAAAGAAATTTTCATGAGAAGGTGATTGCAGCTCTGCTGCAGAC  
CATGGAAGACCAAGGCAATCAACGTGTGCAGGCCCATGCAGCTGCTGCCCTCATTAACTTTACTGAAGAC



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TGTCCTCAAGTCACTACTTATTCCATACTTGGATAATTTGGTGAACATCTGCATTCCATTATGGTACTGA  
 AGCTTCAAGAGCTGATTAGAAAAGGCACCAAGTTAGTTTTGGAACAAGTTGTGACATCCATTGCATCAGT  
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 TGATGGTCCCTTTACTGAAATTTATTTCCACGATGGTGTTCGAGTGGCAGCAGCGGAATCCATGCCTCT  
 TCTCTGGAGTGTGCAAGAGTCCGTGGTCTGAGTACCTCACACAGATGTGGCATTATTTATGTGTGATGCT  
 CTAATTAAGGCCATTGGTACAGAACCAGATTACAGCTCCTCAGAAAATATGCATTCTTTTGCAAAGT  
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 TACACTCAATATTCAGTAGCTACAAGAAAAGGTGTTACCATGGTTTGAACAGCTGCTTCCATTAATTGT  
 CAACCTCATTTGTCCACATAGACCATGGCCAGACAGACAATGGGGATTATGCATCTTTGATGATGCATA  
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 ACAACAGCCCAGAAGTCAAGCAAGCAGCTGCATATGGCTGGGAGTCAATGGCACAGTACGGTGGAGATAA  
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 AAAGAAAATGTCAATGCTACAGAGAAGTGCATCTCAGCAGTAGGGAAAATCATGAAGTTCAAGCCTGACT  
 GTGTAACGTTGAAGAGGTCCTTCCACACTGGTGTCTGGCTTCCACTACATGAAGATAAAGAAGAAGC  
 TGTTTCAGACTTTCAATTATCTGTGTGACCTGATTGAAAGTAATCATCCAATTGTTCTTGGCCAAACAAT  
 ACCAATCTGCCAAAATATTTAGTATAATTGCGGAAGGAGAAATGCACGAGGCAATTAACATGAAGATC  
 CTTGTGCCAAACGCTGGCCAATGTCGTTCCGCAAGTACAGACTTCTGGAGGACTGTGGACTGAGTGCAT  
 AGCACAGCTCAGTCTGAGCAGCAGGCCGCCATTACAGGAGCTCCTGAACTCTGCG

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

**Protein Sequence:**

>RG207221 representing NM\_002271  
 Red=Cloning site Green=Tags(s)

MPEDQVGKLEATENTISAMAAAAEQQFYLLGNLLSPDNVVRKQAEETYENIPGQSKITFLLQAIRNT  
 TAAEEARQMAVLLRRLSSAFDEVYPALPSDVQTAIKSELLMIQMETQSSMRKKVCDIAAELARNLID  
 EDGNNQWPEGLKFLFDSVSSQNVGLREALHIFWNFPGIFGNQQHYLDVIKRMVQCMQDQEHPSIRTL  
 SARATAAFILANEHNVALFKHFADLLPGFLQAVNDSYQNDSDVLKSLVEIADTVPKYLRPHLEATLQLS  
 LKLCGDTSLNMQRQLALEVIVTLSETAAAMLKHTNIVAQTIPQMLAMMVDLEEDDWDANADELEDDDF  
 DSNVAGESALDRMACGLGGKLVLPMIKEHIMQMLQNPWKYRHAGLMALSAIGEGCHQQMEGILNEIVN  
 FVLLFLQDPHPRVRYAACNAVGMATDFAPGFQKFKHEKVIAALLQTMEDQGNQVQAHAAAAALINFTE  
 CPKSLIPYLDNLVKHLHSIMVLKQLQLIQKGTGLVLEQVVTSIASVADTAEEKFVPPYDLFMPSRKHIV  
 ENAVQKELRLLRGKTIIEISLIGLAVGKEKFMQDASDVMQLLKTQDFNDMEDDDPQISYMIASAWARM  
 KILGKEFQYLPVVMGPMKKTASIKPEVALLDTQDMENMSDDDGWVFNLDGQQSFGIKTAGLEEKSTAC  
 QMLVYAKELKEGFVEYTEQVVKLMVPLLKIFYHGDGVRVAAAASMPLLLECARVRGPEYLQMWHFMCDA  
 LIKAIGTEPDSVLESEIMHSFAKCIEMGDGCLNNEHFEELGGILKAKLEEHEFKNQELRQVKRQDEYDE  
 QVEESLQDEDDNDVYILTKVSDILHSIFSSYKEKVLWFQELPLIVNLICPHRPWDRQWGLCIFDDVI  
 EHCSPASFKYAEYFLRPLQYVCDNSPEVRQAAAYGLGVMAQYGGDNYRPFCTEALPLLVRVIQSADSKT  
 KENVNATENCISAVGKIMKFKPDCVNVVEVLPWHL SWLPLHEDKKEAVQTFNYLCDLIESNHPIVLGPNN  
 TNLPKIFSIIEGEMHEAIKHEDPCAKRLANVVRQVQTSGLWTECIAQLSPEQQAIIQELLNSA

TRTRPLE – GFP Tag – V

**Restriction Sites:**

SgfI-MluI



<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u>NM_002271.4, NP_002262.3</u>
<b>RefSeq Size:</b>	6019 bp
<b>RefSeq ORF:</b>	3294 bp
<b>Locus ID:</b>	3843
<b>UniProt ID:</b>	<u>O00410</u>
<b>Cytogenetics:</b>	13q32.2
<b>Protein Families:</b>	Druggable Genome
<b>Gene Summary:</b>	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]