

Product datasheet for **RG209688**

Tau tubulin kinase 2 (TTBK2) (NM_173500) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Tau tubulin kinase 2 (TTBK2) (NM_173500) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	TTBK2
Synonyms:	SCA11; TTBK
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG209688 representing NM_173500 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGAGTGGGGGAGGAGAGCAGCCGGATATCCTGAGTGTTGGAATCCTAGTGAAAGAAAGATGGAAAGTGT
TGAGAAAGATTGGGGGTGGGGCTTTGGAGAAATTTACGATGCCTTGACATGCTCACCAGGAAAAATGT
TGCACTGAAGGTGGAATCAGCTCAACAACCAACAAGTTCTGAAAATGGAAGTTGCTGTTTTGAAAAAG
CTGCAAGGGAAAGACCATGTTTGTAGATTTATTGGCTGTGGGAGGAATGATCGATTCAACTATGTGGTCA
TGCAGTTGCAAGGTTCGGAATCTGGCAGATCTTCGCCGTAGCCAGTCCCGAGGCACATTCACCATTAGTAC
CACTCTCCGGCTGGGTAGACAGATTTTGGAGTCTATTGAAAGCATTCACTTCTGTGGGATTCTTGCATCGA
GACATCAAACCGTCGAACTTCGCTATGGGTTCGCTTTCCTAGTACATGTAGGAAATGTTACATGCTTGATT
TTGGCTTGGCTCGACAATTTACCAATTCCTGTGGTGACGTGACACCACCTCGAGCTGTGGCAGGTTTTCG
AGGGACAGTTTCGTTATGCATCAATCAACGCACATCGGAACAGGAAAATGGGAAGACATGATGACCTTTGG
TCCTTATTCTACATGTTGGTGGAGTTTGTGGTTGGTCAGCTGCCCTGGAGAAAAATAAGGACAAGGAGC
AAGTAGGCTCTATTAAGGAGAGATATGACCACAGGCTCATGTTGAAACATCTCCCTCCAGAATTCAGCAT
CTTTCTAGACCATATCTCTTCTTTGGATTATTTTACAAAACCAGACTACCAGCTTCTTACATCCGTGTTT
GACAATAGCATCAAGACTTTTGGAGTAATTGAGAGTGACCCTTTTGACTGGGAGAAGACTGGAAATGATG
GCTCCCTAACAACCACCCTACTTCTACCACCCTCAGTTGCACACTCGCTTGACCCTGCTGCAATTGG
AATTGCCAATGCTACTCCATCCCTGGAGACTTCTCGAGAAAAACAGATGAGGTATTTCCAGATGAA
CAGCTTAGCGATGGAGAAAATGGCATCCCTGTTGGTGTGTACCAGATAAATGCCTGGATCTCTGGGAC
ACCCCGTCCCGAGGAGAAGGATGTTTGGGAAGAGATGGATGCCAACAACAAAGATAAAGCTTGGAAAT
TTGTAAGGCTGCTACTGAAGAGGAGAACAGCCATGGCCAGGCAATGGTCTTCTCAATGCTCCAAGCCTT
GGGTACCAATTCGTGTCGCTCAGAGATTACTCAGCCAGACAGAGATATCCACTGGTGCAGAAAGTTAC
GTTCCATTACAGCTTTGAGCTGAAAAACGTCTGACCCTGGAGCCAAAGCCAGACACTGACAAGTTCTT
TGAGACCTGCCTGGAGAAAATGCAGAAAGATACCAGTGCAGGAAAAGAATCTATTCTCCCTGCTGCTGCT



[View online »](#)

CATAAGCCTTGCCTTCCTGCTGTGTCCCGTACTGACCACATCTGGCACTATGATGAAGAATATCTCCAG
ATGCCTCCAAGCCTGCTTCTGCCAACCCCTGAGCAGGCAGATGGTGGTGGCAGCAATGGATTTATAGC
TGTTAACCTGAGCTCTTGAAGCAAGAAATGATTCCAAAGAATGGGTGATTGTGGACAAGGAGCAGGAC
CTTCAGGATTTTAGGACAAATGAGGCTGTAGGACATAAAACAACCTGGAAGTCCTTCTGATGAGGAGCCTG
AAGTACTTCAAGTCTGGAGGCATCACCTCAAGATGAAAAGCTCCAGTTAGTCCCTGGGCAGAAAATGA
TCATTTAAAGAAGGAAACCTCAGGTGTGGTCTTAGCACTTTCTGCAGAGGGTCCCTACTGCTGCTTCA
GAACAATATACAGATAGGCTGGAACCTCCAGCCTGGAGCTGCTAGTCAGTTTATTGCAGCGACGCCACAA
GTCTAATGGAGGCGCAGGCAGAAGGACCCCTTACAGCGATTACAATTCTAGACCTTCTGTGGCATCTAC
ACAGTCAACTTCAGGAAGCTTCTACTGTGGTCAAGCAGCCAGAGAAGAAAGATCTTCAGCCCATGGAGCCC
ACTGTGGAACCTTACTCTCCAAGGGAAAACCTTCTGGCTTGGTGTGACAGAGGGTGAACCTCCTAGTG
GAGGAAGCAGAACAGATTTGGGGCTTCAGATAGATCACATTGGTCATGACATGTTACCCAACATTAGAGA
AAGTAACAAATCTCAAGACCTGGGACCAAAAAGAACTTCTGATCATAATAGACTGGTGTGAGAGAATTT
GAAAATCTCCCTGGGAAAACGAAGAGAAAAGCATCCTTTAGAGTCAGATAATGAAGATGAGAAGTTAA
GTAGAGGGCAGCATTGTATTGAGATCTCCTCTCTCCAGGAGATTTGGTAATTGTGAAAAGGATCACTC
AGCTACTACTGAACCTTGTGATGTGACAAAACACAGACTTTTAGTGTGGTGCCAAATCAAGACAAAAT
AATGAGATAATGAAGCTTCTGACAGTTGGAACCTCAGAAAATTTCTCCAGAGACATTGACCCACATGTTG
AAGGTCAGATAGGCCAAGTGGCAGAAAATGCAAAAAAATAGATATCTAAGGATGATGACATCATGAGTGA
AGACTTGGCAGGTCATCAAGGAGACCTCTACTTTTTTGACCAAGAGGGCAAGAGAGAGAAAAATCACC
CCTAGAAATGGAGAACTATTTCAATTGTGTTTCAGAGAATGAACATGGTGGCCCAACCCGGAAGGATAGG
TTAGGTCATCCTTTGTAAGTACACAGCCGAATCCCTGTTTTAGCACAAAGATAGACTCAACTTTGGA
ATCATCCTCTCCAGTTTCTGAAAAGAAAAGCTCCTCCAAAAGAAAAGCCTATCAGCCAGACCTAGTCAAG
CTTCTGGTGGAAAAAGACAATTCAGTCCCTTCTGGCGACCTCTCAAGTGCCTCTGATAAATTGCTAG
AGGAGAAACTAGCTACTGTTCTGCTCCCTTTTGTGAGGAGGAAGTGTCACTCCCTTTTCAAGACTGAC
AGTAGATTCTCACCTGAGTAGGTCAGCTGAAGATAGCTTTCTGTACCCATCATCTCCAGTCTAGAAAAG
AGCAAAATTCAGGCCAGTTTTCATGGTCAACACAGATCAGGTCAATAGCTCAACTTCGTCTCAGTTCT
TTCCTCGGCCACCACCAGGAAAGCCACCACGAGGCTGGAGTAGAAGCCAGGCTACGCAGATATAAAGT
CCTAGGGAGTAGTAAGTCCGACTCAGACCTTTTCTCCGCTGGCCAAATTTCTCAAAATGGATCTCAG
AAACCCCGGAGCACTACTCAGTGAAGAGTCCAGGATCTCCTCACAATCCAAAACACCACCAAGAGTC
CAGTTGTCCCTCGCAGGAGTCCAGTGCCTCTCCTCGAAGCTCATCCTTGCTCGCACGTCTAGTTCCTC
ACCATCTAGGGCTGGACGGCCCCACCATGACCAGAGGAGTTCGTCACATCTGGGAGAAAGCAAGTCA
CCTCCAGCCACTCAGGATCTTCTCCTCCAGGAGTCTGCAACAGGAGCATTGCAAAACCCAGCAAGA
ATGGCCTGAAAGGATCCGGCAGCCTCCACCACCACTCAGCCAGCACTAAAACCCCAAGGAAGAGTAA
GCCAGCCAGTAACTCAGCAGA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG209688 representing NM_173500
 Red=Cloning site Green=Tags(s)

```

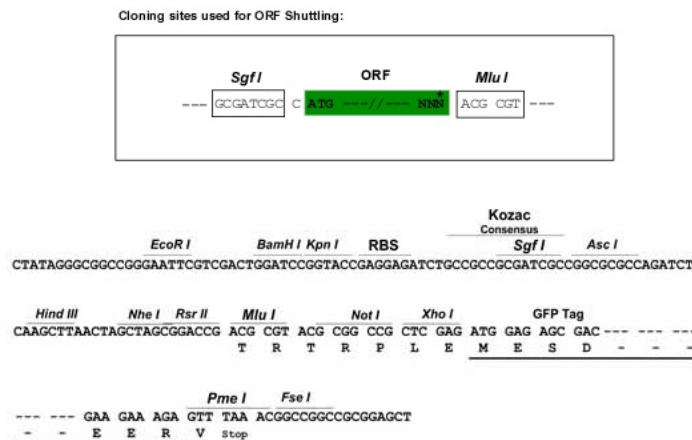
MSGGGEQPDILSVGILVKERWVLRKIGGGGFGEIYDALDMLTRENVALKVESAQQPKQVLKMEVAVLKK
LQGDHVCRFICGRNDRFNYYVMQLQGRNLADLRRSQSRGTFITSTTLRLGRQILEIESIHSVGLHR
DIKPSNFAMGRFPSTCRKCYMLDFGLARQFTNSCGDVRPPRAVAGFRGTVRYASINAHNRNEMGRHDDLW
SLFYMLVEFVVGQLPWRKIKDKEQVGSIKERYDHRMLKHLPEFSIFLDHISSLDYFTKPDYQLLTSVF
DNSIKTFGVIESDPFDWEKTGNDGSLTTTTSTTPQLHTRLTPAAIGIANATPIPGDLLRENTDEVFPDE
QLSDGENGIPVGVSPDKLPGSLGHRPQEKDVWEEMDANKNKIKLGICKAATEEENSHGQANGLLNAPSL
GSPIRVRSEITQPDRDIPLVRKLRSIHSFELEKRLTLEPKPDTDKFLETCEKMQKDT SAGKESILPALL
HKPCVPAVSRDHIWHYDEEYLPDASKPASANTPEQADGGGSGNGFIAVNLSSCKQEIDSKEWVIDKEQD
LQDFRTNEAVGHKTTGSPSDEEPEVLQVLEASPQDEKLQGPWAENDHLKKTSGVVLALSAEGPPTAAS
EQYTDRLLELQPGAASQFIAATPTSLMEAQAEGPLTAITIPRPSVASTQSTSGSFHCGQQPEKDLQPMEP
TVELYSPRENFSGLVVTEGEPSSGGSRDGLQIDHIGHDMPLNIRESNKSQDLGPKELPDHNRLLVREF
ENLPGETEESILLESDNEDEKLSRGQHCIEISSLPDGLVIVEKDHSATTEPLDVTKTQTFVVPNQDKN
NEIMKLLTVGTSEISSRDIDPHVEGQIGQVAEMQKNKISKDDDI MSEDLPGHQGDLSTFLHQEGKREKIT
PRNGELFHCVSENEHGAPTRKDMVRSSVFTRHSRIPVLAQEIDSTLESSSPVSAKEKLLQKAYQPDLVK
LLVEKRQFKSFLGDLSSASDKLLEEKLATVPAPFCEEEVLT PFSRLTVDSHLSRSAEDSFLSPIISQSRK
SKIPRPVSWVNTDQVNSSTSSQFFPRPPPQKPTRPGVEARLRRYKVLGSSNSDSLFSRLAQILQNGSQ
KPRSTTQCKSPGSPHNPKTPPKSPVPPRRSPSASPRSSSLPRTSSSSPSRAGRPHHDQRSSSPHLLGRSKS
PPSHSGSSSSRRSCQEHCKPSKNGLKSGSLHHHSASTKTPQGKSKPASKLSR
  
```

TRTRPLE - GFP Tag - V

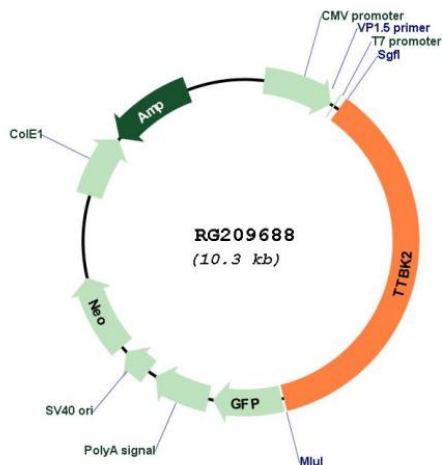
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_173500

ORF Size: 4947 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_173500.2](#), [NP_775771.2](#)

RefSeq Size: 5613 bp

RefSeq ORF: 3735 bp

Locus ID: 146057

UniProt ID: [Q6IQ55](#)

Cytogenetics:	15q15.2
Protein Families:	Druggable Genome, Protein Kinase
Gene Summary:	This gene encodes a serine-threonine kinase that putatively phosphorylates tau and tubulin proteins. Mutations in this gene cause spinocerebellar ataxia type 11 (SCA11); a neurodegenerative disease characterized by progressive ataxia and atrophy of the cerebellum and brainstem. [provided by RefSeq, Aug 2009]