

Product datasheet for RR201546

Tnk2 (NM_001008336) Rat Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Tnk2 (NM_001008336) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Tnk2
Synonyms:	MGC94214
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>RR201546 representing NM_001008336 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCAGCCGGAGGAGGGAACAGGCTGGCTGCTGGAGCTGCTGTCTGAGGTGCAGCTACAACAGTATTTCC
TGAGGCTCCGAGATGACCTCAACATTACCCGCCTGTCTCATTTTGAGTATGTCAAAAACGAAGACCTGGA
AAAGATTGGCATGGCCCGCCTGGCCAGAGGCGCTATGGAGGCTGTGAAGAGGAGGAAGGCCATGTGC
AAACGCAAGTCATGGATGAGCAAGGTGTTCAAGTGGAAAGCGGCAGGAGGCTGAGTTCCTTCCCATCACT
CTCAGAGCACCTTCCGGAAGCCCTCCCCACCCAGGGGGCTGGCAGGGGAGGGGACCCCTGCAGAGCCT
CACCTGCCTCATTGGGGAGAAAGACCTGCGCCTGCTGGAGAAGCTGGGAGATGGCTCCTTTGGCGTGGT
CGCAGGGGTGAATGGGATGCCCTGCAGGGAAGACGGTGAAGTGTGGCCGTGAAGTGCCTGAAACCTGATG
TGCTGAGCCAGCCGAGGCCATGGACGACTTCAATCCGGGAGGTCAATGCCATGCATTGCTAGACCACCG
AAACCTCATTGCTTGTACGGTGTGGTGTCTCACACCACCCATGAAGATGGTGACAGAGCTGGCCCTCTG
GGATCCTTGTGGACCGCTACGTAACACCAAGGTCAATTCCTCTTGGGACGCTGAGTCGCTATGCCG
TGCAGGTGGCTGAGGGCATGGGCTACCTGGAGTCCAAGCGCTTCATTACCGAGACCTGGCTGCTCGAAA
TCTGCTTTTGGCCACCCGTGACCTGGTCAAGATTGGGGACTTTGGACTGATGCGAGCTCTGCCCCAGAAT
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CACGGACTTTCTCCATGCCAGTGACACCTGGATGTTTGGGGTCACTGTGGGAGATGTTTACGTATGG
CCAGGAGCCCTGGATTGGCTCAATGGCAGCCAGATCCTGCATAAGATTGACAAGGAAGGGGAGCGCCTG
CCCCGGCCTGAGGACTGCCCCAAGACATCTACAATGTCATGGTCCAGTGTGGGCCACAAAGCCAGAGG
ACAGACCCACATTTGTGGCCCTTCGGGACTTCTGCTGGAGGCTCAGCCTACAGACATGCGGGCCCTTCA
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GAGAATACTGGTGGCGTGGTCAAGACACAGGACGCTGTGTGGGACCCTTCCCTCGAAATGTGGTGA
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TGGCGACAGTGACCCCGCCACTGCTGGGGTTCCCTGACAGGATCGATGAACTGTACCTGGGAAACCC
ATGGACCCCTGACCTGCTGAGTGTGGAAGTGAACCTCGCGACCCACCCAGCATTTAGGACGGATGA



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AAAAGCCAACATATGACCCTGTGAGTGAGGACCCAGACCCCTGTCCAGCGACTTCAAGAGACTTGGCCT
 GAGGAAGCCAGCCCTGCCCGAGGGCTCTGGCTGGCAAAGCCCTCAGCCCGGTGCCAGGCACCAAGGCA
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 CCCCACACGGGCACTGCCACGACCTTACATCCTACACCTGTGGTGGACTGGGACGCTCGCCCGTGCC
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 GCCCAGACTGCAGAGATTTCCAGGCACTGCAGCAGGAGTGTATGCGGCAGCTACAGTCCCCACTGGCC
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 GTCTTCGGCCACGGGTGGAGTCCACAAGTGTAGAGATGTTGACTGGAACCTAGAGCAAGCCGGCTG
 TCACCTTCTGGGTCCTGTGGCCCTGCCACCACAAACGC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RR201546 representing NM_001008336
 Red=Cloning site Green=Tags(s)

MQPEEGTWLLELLSEVQLQQYFLRLRDDLNITRLSHFEYVKNEDLEKIGMRPGQRRLWEAVKRRKAMC
 KRKSWMSKVFSGKRQEAFFSHHSQSTFRKPSPTPGGLAGEGTLQSLTCLIGKDLRLEKLDGSGFGVV
 RRGWDAPAGKTVSAVKCLKPDVLSQPEAMDDFIREVNAMHSLDHRNLI RLYGVVLTTPMKMVTTELAPL
 GSLLDRLRKHQGHFLGLT SRYAVQVAEGMGYLESKRFIHRDLAARNLLLATRDLVKIGDFGLMRALPQN
 DGHYVMQEHRKVPFAWCAPELTKTRTF SHASDTWMFGVTLWEMFTYQEPWIGLNGSQILHKIDKEGERL
 PRPEDCPQDIYNVMVQCWAHKPEDRPTFVALRDFLLEAQPTDMRALQDFEEDKLHIQMNDVITVIEGRA
 ENYWWRGQNTRTLCVGPFPNNVTSVAGLSAQDISQPLQNSFIHTGHGSDPRHCWGFDPDRIDELYLGNP
 MDPPDLLSVELSTSRPTQHLGRMKKPTYDVPSEDPDPLSSDFKRLGLRKPALPRGLWLAKPSARVPGTKA
 GRSSGGEVTLIDFGEPEVAPTPRPCAPSLAQLAMDACSLLDKTPPQSPTRALPRPLHPTPVVDWDARPLP
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 AQTAEIFQALQQECMRQLQVPTGQLTPSPTPGDDKQVPPRVPIPPRPTRPRVGLSPAPLGEEEASRWP
 GPSSPPRVPREPLSPQGSRTSPSPVPPGSSPLPHRLSSSPGKTMPTTQSFASDPKYATPQVIQAPGPRA
 GPCILPIVRDGRKVSSTHYLLPERPPYLERYQRFLREASPEEPAALPVPLLPPPSTPAPAAPTATVR
 PMPQAAPDPKANFSTNNSNPGAQPPSLRASARLPQRGCPGDGQEAARPADKVQMLQAMVHGVTTEECQAA
 LRSHSWSIQRAAQYLKVEQLFGLGLRPRVECHKVLEMFWDWNLEQAGCHLLGSCGPAHHR

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

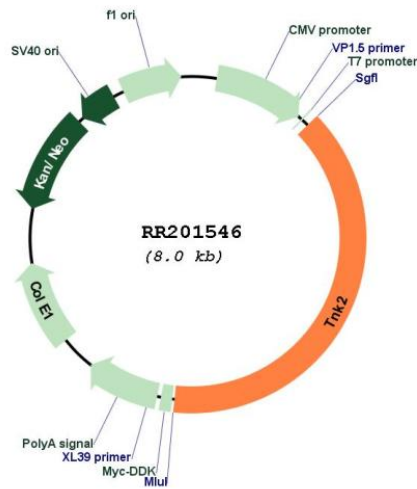
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_001008336

ORF Size: 3120 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:	<ol style="list-style-type: none">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:	<u>NM_001008336.1</u> , <u>NP_001008337.1</u>
RefSeq Size:	4250 bp
RefSeq ORF:	3123 bp
Locus ID:	303882
UniProt ID:	<u>Q5U2X5</u>
Cytogenetics:	11q22
MW:	115.1 kDa
Gene Summary:	<p>Non-receptor tyrosine-protein and serine/threonine-protein kinase that is implicated in cell spreading and migration, cell survival, cell growth and proliferation. Transduces extracellular signals to cytosolic and nuclear effectors. Phosphorylates AKT1, AR, MCF2, WASL and WWOX. Implicated in trafficking and clathrin-mediated endocytosis through binding to epidermal growth factor receptor (EGFR) and clathrin. Binds to both poly- and mono-ubiquitin and regulates ligand-induced degradation of EGFR, thereby contributing to the accumulation of EGFR at the limiting membrane of early endosomes. Downstream effector of CDC42 which mediates CDC42-dependent cell migration via phosphorylation of BCAR1. May be involved both in adult synaptic function and plasticity and in brain development. Activates AKT1 by phosphorylating it on 'Tyr-176'. Phosphorylates AR on 'Tyr-267' and 'Tyr-363', thereby promoting its recruitment to androgen-responsive enhancers (AREs). Phosphorylates WWOX on 'Tyr-287'. Phosphorylates MCF2, thereby enhancing its activity as a guanine nucleotide exchange factor (GEF) toward Rho family proteins. Contributes to the control of AXL receptor levels. Confers metastatic properties on cancer cells and promotes tumor growth by negatively regulating tumor suppressor such as WWOX and positively regulating pro-survival factors such as AKT1 and AR (By similarity).[UniProtKB/Swiss-Prot Function]</p>