

Product datasheet for **RR210211**

Brsk1 (NM_001127337) Rat Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Brsk1 (NM_001127337) Rat Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Brsk1
Synonyms:	RGD1563268; Sad-b
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RR210211 representing NM_001127337
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGTCGTCGGGTCCAAGGAAGGTGGCGGGGCTCCCCGCCTACCACCTCCCACACCCACACCCACACC
 CACCCCAGCACGCCAATATGTGGGCCCTATCGGCTGGAGAAGACGCTGGGCAAAGGACAGACAGGTCT
 AGTTAAACTTGGGGTCCACTGCATCACGGGTGAGAAGGTCGCTGTCAAGATCGTGAACAGGGAGAAGCTG
 TCGGAATCTGTGCTGATGAAGGTGGAGAGGGAAATCGCCATTCTAAAGCTCATTGAACACCCGCATGTGC
 TCAAGCTCCACGACGTCTACGAGAACAAGAAATATTTATACTTGGTGCTTGGCATGTTTCTGGTGGTGA
 GCTGTTGACTACCTGGTAAAAAAGGGAGACTGACACCCAAGGAGGCCGAAAGTCTTCCGCCAGATT
 GTGTCAGCGCTGGACTTCTGCCATAGCTACTCCATCTGTCACAGGGACCTGAAGCCAGAGAACCTGCTGC
 TGGATGAGAAAAACAACATCCGCATCGCAGACTTTGGCATGGCGTCCCTGCAGGTGGGGGACAGCCCTCT
 GGAGACCAGCTGTGGTCCCCCATTACGCATGTCCAGAGGTGATCAAGGGGAGAAGTATGATGGCCGC
 CGGGCAGACATGTGGAGCTGTGGAGTATCCTGTTTGCCTGCTTGTGGGGGCGCTGCCCTTCGATGATG
 ACAACCTACGACAGCTACTAGAGAAGGTGAAACGTGGTGTCTTCCACATGCCGCACCTTATCCCTCCAGA
 CTGCCAGAGCCTCCTGAGAGGGATGATTGAAGTGGAGCCCAGAAAAGGCTCAGTCTGGAGCAAATTCAG
 AAACATCCTTGGTATCTGGGCGGAAACACGAACCAGACCCTTGCTGGAGCCAGCCCCAGGCCGCAGAG
 TAGCTATGCGGAGCCTGCCTTCCAATGGCGAGCTGGACCTGACGTTCTGGAAAGCATGGCGTCTCTGGG
 CTGCTTACAGACCAGCGAGCGGTACACAGAGAAGTGGAAAGTGAAGAGGAAAACCAAGAAAAGATGATC
 TATTATTTGCTTTTGGATCGGAAAGAGCGGTACCCTAGCTGTGAAGACCAGGACCTGCCTCCTCGGAATG
 ATGTTGACCCACCTCGGAAGCGTGTGGATTCCCCATGCTGAGCAGACACGGGAAACGGAGGCCAGAGCG
 GAAGTCCATGGAAGTCTCAGCATCACAGATGCTGGGAGTGGTGGCTCTCCAGTGCCTACCAGAAGGGCC
 TTGGAGATGGCCAGCACAGTCAGAGATCCCGCAGCGTCAAGTGGAGCATCCACTGGTCTGTCTCCAGCC
 CTCTAAGCAGCCCAAGGAGTCCGGTCTTTTCTTCTCACCGGAGCCAGGCGTTGGAGATGAGGCTAGAGG
 TGGAGGCTCCCCAATTCCAAAACACAGACGCTGCCTTCTCGGGGCCCCAGAGGTGGGGGCGCTGGAGAG
 CAGCCACCACCTCCAGTCCCCTTCCACGCCCTTGCTGGACCACCAGGCTCCCCGCGCTCCTCCGGCG
 GAACCCCTTGCCTCACCTCTGCACACGCTCGAGCCAGCCCTACCGGGACTCCAGGAACCTACACCACC
 TCCCAGCCAGGCGGTGGCGTGGGGGAGCCGCTGGAGAAGTCGTCTCAACTCCATCCGCAACAGCTTC
 CTGGGCTCCCCTCGCTTCCACCGCGCAAGATGCAGGTCCCTACCGCTGAGGAGATGTCCAGTTTGACAC
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 AATATTCCTCGTGCTAAAGGACAAACCTCTCAGCAGCATCAAAGCGGACATTGTCCATGCCTTTCTGTGC
 ATCCCTAGCCTGAGTCACAGTGTGCTGTACAGACCAGCTTACGGGCCGAATACAAGGCCAGCGGTGGCC
 CCTCTGTCTTCCAGAAGCCTGTCCGCTTCCAGGTGGACATCAGCTCCTCTGAGGGTCCAGAACCCTCACC
 CCGAAGAGATGGTAGCAGTGGAGGTGGCATCTACTCAGTCACCTTCACTCTATCTCCGGTCTAGCCGT
 CGGTTCAAGCGTGTGGTAGAGACCATCCAGGCACAGTTGCTGAGTACTCATGACCAGCCCTCCGTGCAGG
 CCTTGGCAGATGAGAAGAATGGAGCCCAGACCCGGCTGCTGGTACCCACCCCGAAGCCTGCAGCCTCC
 ACCAGGCCGCCCTGACCCTGATCTGAGTAGCTCTCCCCGCGAGGACCCTTAAGGACAAGAAGCTCCTG
 GCCACCAATGGAACCCCTTACCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RR210211 representing NM_001127337
Red=Cloning site Green=Tags(s)

MSSGSKEGGGSPAYHLPHPHPPQHAQYVGPYRLEKTLGKGQTGLVKLGVHCITGQKVAVKIVNREKL
SESVLMKVEREIAILKLEIHPHVLKLDVYENKKYLYLVLEHVSGGELFDYLVKKGRLTPKEARKFFRQI
VSALDFCHSYSICHRDLKPENLLLDEKNNIRIADFGMASLQVGDLSLETSCGSPHYACPEVIKGEKYDGR
RADMWSCGVILFALLVGALPFDDNLRQLLEKVKRGVFMHPHFIPPDCQSLLRGMIEVEPEKRLSLEQIQ
KHPWYLGKHEPDPCLEPAPGRRVAMRSLPSNGELDPDVLESMASLGCFRDRERLHRELSEEENQEKMI
YYLLLDKERYPSCEDQDLPPRNDVPPRKRVDSPMLSRHGKRRPERKSMEVLSITDAGSGGSPVPTTRA
LEMAQHSQRSRVSGASTGLSSSPLSSPRSPVFSPEPGVGDEARGGGSPTSKTQTLPSRGPGRGGGAGE
QPPPPSARSTPLPGPPGSPRSSGGTPLHSLHTPRASPTGTPGTTPPPSPGGVGGAAWRSRLNSIRNSF
LGSFRFHRRKMVPTAEEMSSLTPESPELAKRSWFGNFISLDKEEQIFLVLKDKPLSSIKADIVHAFSL
IPSLSHSVLSQTSFRAEYKASGGPSVFQKPVRFQVDISSSEGPEPSRRDGSSGGGIYSVTFTLISGPSR
RFKRVVETIQALLSTHDQPSVQALADEKNGAQTRPAGTPPRLQPPPGRDPDLSSSPRRGPKDKKLL
ATNGTLP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: Sgfl-MluI

Cloning Scheme:


ACCN: NM_001127337

ORF Size: 2334 bp

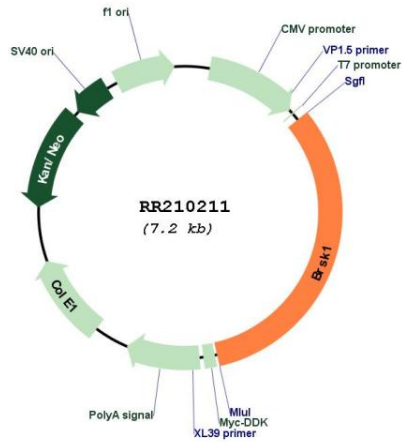
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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_001127337.1, NP_001120809.1</u>
RefSeq Size:	2442 bp
RefSeq ORF:	2337 bp
Locus ID:	499073
UniProt ID:	<u>B2DD29</u>
Cytogenetics:	1q12
MW:	85.2 kDa
Gene Summary:	<p>Serine/threonine-protein kinase that plays a key role in polarization of neurons and centrosome duplication. Phosphorylates CDC25B, CDC25C, MAPT/TAU, RIMS1, TUBG1, TUBG2 and WEE1. Following phosphorylation and activation by STK11/LKB1, acts as a key regulator of polarization of cortical neurons, probably by mediating phosphorylation of microtubule-associated proteins such as MAPT/TAU at 'Thr-523' and 'Ser-573'. Also regulates neuron polarization by mediating phosphorylation of WEE1 at 'Ser-642' in post-mitotic neurons, leading to down-regulate WEE1 activity in polarized neurons. Also acts as a positive regulator of centrosome duplication by mediating phosphorylation of gamma-tubulin (TUBG1 and TUBG2) at 'Ser-131', leading to translocation of gamma-tubulin and its associated proteins to the centrosome. Involved in the UV-induced DNA damage checkpoint response, probably by inhibiting CDK1 activity through phosphorylation and activation of WEE1, and inhibition of CDC25B and CDC25C (By similarity). In neurons, localizes to synaptic vesicles and plays a role in neurotransmitter release, possibly by phosphorylating RIMS1.[UniProtKB/Swiss-Prot Function]</p>

Product images:



Circular map for RR210211