

Product datasheet for **MR224920**

Brsk2 (NM_001009929) Mouse Tagged ORF Clone

Product data:

| | |
|---------------------------|---|
| Product Type: | Expression Plasmids |
| Product Name: | Brsk2 (NM_001009929) Mouse Tagged ORF Clone |
| Tag: | Myc-DDK |
| Symbol: | Brsk2 |
| Synonyms: | 4833424K13Rik; SAD-A; SADA |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |



[View online »](#)

**ORF Nucleotide
Sequence:**

>MR224920 representing NM_001009929
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGACATCGACGGGAAGGACGGCGGGCGCAGCACGCGCAGTATGTGGGGCCCTACCGGCTGGAGA
 AGACGCTGGGCAAGGGGCAGACAGGCTTGGTGAAGCTGGGAATCCACTGTGTCACTTGCCAGAAGGTCGC
 CATCAAAATCGTGAACCGTGAGAAGCTCAGTGAGTCGGTCTGATGAAGGTGGAGCGAGAGATTGCCATC
 TTGAAGCTCATCGAGCATCCACATGTAAGCTGCATGACGTCTATGAAAAACAAAAAATATTTATAACC
 TGGTGCTAGAACATGTGTCTGGGGGAGAGCTGTTGACTACCTGGTGAAGAAGGGCCGGTGACCCCCAA
 GGAGGCCCGCAAGTTCTCCGGCAGATCATCTGCACTGGACTTCTGTACAGCCACTCCATATGCCAT
 AGAGACTTGAAGCCAGAGAACCTGCTGCTAGATGAGAGGAACAACATCCGTATTGCAGACTTTGGCATGG
 CATCCCTGCAGGTGGGAGACAGCCTGCTGGAGACCAGCTGCGGATCTCCACACTATGCCTGTCCGGAAGT
 GATTCGGGGCGAGAAGTATGATGGCCGCAAGGCAGATGTGTGGAGCTGTGGTGTGATCCTGTTCCGCTTG
 CTGGTGGGGGCTCTGCCTTTTATGATGATGACAACCTGCGGCAGTTGCTGGAGAAGGTCAAGCGTGGTGTGT
 TCCACATGCCACACTTTATCCCACCAGACTGCCAGAGTCTCCTGCGTGGCATGATTGAGGTGGATGCAGC
 TCGGCGCCTCACGCTAGAGCACATTCAGAAACACATATGGTATATAGGTGGCAAGAATGAGCCAGAGCCC
 GAACAGCCCATCCCACGCAAGGTGCAGATCCGCTCACTACCCAGCTTGGAAAGACATTGACCTGATGTGT
 TGGACAGCATGCACTCACTGGGCTGTTCCGAGACCGCAACAAGTGTGTCAGGATCTGCTATCTGAGGA
 GGAGAATCAGGAAAAGATGATTTATTTCTCCTCCTGGATCGGAAAGAACGGTATCCAAGCCATGAGGAT
 GAGGACCTGCCCCCAGGAATGAGATAGACCCTCCCGGAAGCGTGTGGATTCCCCGATGCTGAACCGGC
 ATGGCAAGCGGGACCTGAGCGCAAGTCCATGGAAGTGTGTCAGTGTGACAGATGGTGGCTCCCAAGTGC
 TGCACGGAGAGCCATTGAGATGGCCAGCATGGCCAGAGATCTCGATCCATCAGTGGTGGCTCCTCAGGC
 CTTTCTACAAGTCCACTCAGCAGTCTCAGGTCACCCCTCACCCCTCACCAAGGGGTAGTCCCCTTCTTA
 CCCCCAAGGGACGCCTGTCCACACGCCAAAGGAGAGCCAGCTGGCACACCCCAACCCACACCACCATC
 CAGCCCTAGTGTGGAGGAGTCCCTGGCGGACACGACTGAACTCCATCAAGAACAGCTTCTGGGCTCA
 CCTCGATTCCACCGCCGAAACTCCAAGTTCACGCGCAGAGGAGATGTCCAACCTGACCCAGAACTCCT
 CTCCAGAGCTGGCAAGAAATCGTGGTTCGGGAACCTCATCAACCTGGAGAAGGAGGAGCAGATCTTTGT
 GGTGATCAAGGACAAGCCCTGAGCTCCATCAAGGCTGACATCGTTCATGCCTTCTGTCGATCCCAGC
 CTCAGCCACAGCGTTATTTCCAGACAAGCTTCAGGGCTGAATACAAGGCCACAGGGGGCCAGCAGTGT
 TCCAGAAGCCGGTCAAGTTCAGGTGGACATCACCTACACTGAGGGCGGAGAGGCCAGAAAGGAGAATGG
 CATCTACTCAGTCACATTCACTTACTCTCAGGCCCAAGTTCGCGCTTCAAGAGGGTGGTGGAGACCATC
 CAGGCCAGCTGTAAAGCACCATGACCAGCCATCAGCCAGCACCTGTGAGAACCACCCCGCCAGCGC
 CAGGACTAAGCTGGGGTGTGGGCTTAAGGGCCAGAAGGTGGCCACCAGCTACGAGAGTAGCCTC

ACGCGTACGCGGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR224920 representing NM_001009929
Red=Cloning site Green=Tags(s)

```

MTSTGKDGGGAQHAQYVGPYRLEKTLGKGQTGLVKLGIHCVTCQKVAIKIVNREKLSSEVLMKVEREIAI
LKLIEHPHVLKLDVYENKKYLVLVLEHVS GGELFDYL VKKGRL TPKEARKFFRQIISALDFCHSHSICH
RDLKPENLLLDERNNIRIADFGMASLQVGD S LLETSCGSPHYACPEVIRGEKYDGRKADVWSCGVILFAL
LVGALPFDDDNLRQLLEKVKRGVFHMPHF IPPDCQSLLRGMIEVDAARRL TLEHIQKHIWYIGGKNEPEP
EQPIPRKVQIRSLPSLEDIDPDVLD SMHSLGCFRDRNKLLQDLLSEEENQEKMIYFLLLDRKERYPSHED
EDLPPRNEIDPPRKRVDSPMLNRHGKRRPERKSMEVLSVTDGGSPVPARAIEMAQHQRSRISGASSG
LSTSPLSSPRVTPHPSPRGSPLTPKGPVHTPKESPAGTPNPTPPSSPSVGGVPWRTRLNSIKNSFLGS
PRFHRRKLQVPTPEMSNLTPESPELAKKSWFGNF INLEKEEQIFVVIKDKPLSSIKADIVHAFLSIPS
LSHSVISQTSFRAEYKATGGPAVFQKPKVQVDITYTEGGEAQKENGIIYSVTFTLLSGPSRRFRKRVETI
QAQLLSTHDQPSAQLSEPPPPAPGLSWGAGLKGQKVATSYESSL
    
```

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM_001009929

ORF Size: 2025 bp

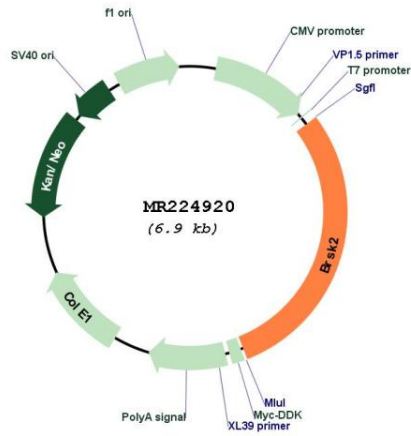
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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_001009929.3</u> , <u>NP_001009929.1</u> |
| RefSeq Size: | 2028 bp |
| RefSeq ORF: | 2028 bp |
| Locus ID: | 75770 |
| UniProt ID: | <u>Q69Z98</u> |
| Cytogenetics: | 7 F5 |
| MW: | 75.8 kDa |
| Gene Summary: | <p>Serine/threonine-protein kinase that plays a key role in polarization of neurons and axonogenesis, cell cycle progress and insulin secretion. Phosphorylates CDK16, CDC25C, MAPT/TAU, PAK1 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-504' and 'Ser-554'. 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. Plays a role in the regulation of the mitotic cell cycle progress and the onset of mitosis. Plays a role in the regulation of insulin secretion in response to elevated glucose levels, probably via phosphorylation of CDK16 and PAK1. While BRSK2 phosphorylated at Thr-175 can inhibit insulin secretion (PubMed:22798068), BRSK2 phosphorylated at Thr-261 can promote insulin secretion (PubMed:22669945). Regulates reorganization of the actin cytoskeleton. May play a role in the apoptotic response triggered by endoplasmic reticulum (ER) stress.</p> <p>[UniProtKB/Swiss-Prot Function]</p> |

Product images:



Circular map for MR224920