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Product datasheet for MC220106

Brsk2 (NM_029426) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Brsk2 (NM_029426) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Brsk2
Synonyms:	4833424K13Rik; SAD-A; SADA
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin

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Fully Sequenced ORF:

>MC220106 representing NM_029426
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGACATCGACGGGGAAGGACGGCGGCGGGGCGCAGCACGCGCAGTATGTGGGGCCCTACCGGCTGGAGA
AGACGCTGGGCAAGGGGCAGACAGGCTTGGTGAAGCTGGGAATCCACTGTGTCACTTGCCAGAAGGTCGC
CATCAAAATCGTGAACCGTGAGAAGCTCAGTGAGTCGGTGCTGATGAAGGTGGAGCGAGAGATTGCCATC
TTGAAGCTCATCGAGCATCCACATGTACTGAAGCTGCATGACGTCTATGAAAACAAAAAATATTTATACC
TGGTGCTAGAACATGTGTCTGGGGGAGAGCTGTTCGACTACCTGGTGAAGAAGGGCCGGCTGACCCCCAA
GGAGGCCCGCAAGTTCTTCCGGCAGATCATCTCTGCACTGGACTTCTGTCACAGCCACTCCATATGCCAT
AGAGACTTGAAGCCAGAGAACCTGCTGCTAGATGAGAGGAACAACATCCGTATTGCAGACTTTGGCATGG
CATCCCTGCAGGTGGGAGACAGCCTGCTGGAGACCAGCTGCGGATCTCCACACTATGCCTGTCCGGAAGT
GATTCGGGGCGAGAAGTATGATGGCCGCAAGGCAGATGTGTGGAGCTGTGGTGTGATCCTGTTCGCCTTG
CTGGTGGGGGCTCTGCCTTTTGATGATGACAACCTGCGGCAGTTGCTGGAGAAGGTCAAGCGTGGTGTGT
TCCACATGCCACACTTTATCCCACCAGACTGCCAGAGTCTCCTGCGTGGCATGATTGAGGTGGATGCAGC
TCGGCGCCTCACGCTAGAGCACATTCAGAAACACATATGGTATATAGGTGGCAAGAATGAGCCAGAGCCC
GAACAGCCCATCCCACGCAAGGTGCAGATCCGCTCACTACCCAGCTTGGAAGACATTGACCCTGATGTGT
TGGACAGCATGCACTCACTGGGCTGCTTCCGAGACCGCAACAAGCTGCTGCAGGATCTGCTATCTGAGGA
GGAGAATCAGGAAAAGATGATTTATTTCCTCCTCCTGGATCGGAAAGAACGGTATCCAAGCCATGAGGAT
GAGGACCTGCCCCCCAGGAATGAGATAGACCCTCCCCGGAAGCGTGTGGATTCCCCGATGCTGAACCGGC
ATGGCAAGCGGCGACCTGAGCGCAAGTCCATGGAAGTGCTCAGTGTGACAGATGGTGGCTCCCCAGTGCC
TGCACGGAGAGCCATTGAGATGGCCCAGCATGGCCAGAGATCTCGATCCATCAGTGGTGCGTCCTCAGGC
CTTTCTACAAGTCCACTCAGCAGTCCTCGGGTGACCCCTCACCCCTCACCAAGGGGTAGTCCCCTTCCTA
CCCCCAAAGGGACGCCTGTCCACACGCCAAAGGAGAGCCCAGCTGGCACACCCAACCCCACACCACCATC
CAGCCCTAGTGTTGGAGGAGTGCCCTGGCGGACACGACTGAACTCCATCAAGAACAGCTTCCTGGGCTCA
CCTCGATTCCACCGCCGGAAACTCCAAGTTCCCACGCCAGAGGAGATGTCCAACCTGACCCCAGAATCCT
CTCCAGAGCTGGCCAAGAAATCGTGGTTCGGGAACTTCATCAACCTGGAGAAGGAGGAGCAGATCTTTGT
GGTGATCAAGGACAAGCCCCTGAGCTCCATCAAGGCTGACATCGTTCATGCCTTCCTGTCGATCCCCAGC
CTCAGCCACAGCGTTATTTCCCAGACAAGCTTCAGGGCTGAATACAAGGCCACAGGGGGCCCAGCAGTGT
TCCAGAAGCCGGTCAAGTTCCAGGTGGACATCACCTACACTGAGGGCGGAGAGGCCCAGAAGGAGAATGG
CATCTACTCAGTCACATTCACTTTACTCTCAGGCCCCAGTCGCCGCTTCAAGAGGGTGGTGGAGACCATC
CAGGCCCAGCTGTTAAGCACCCATGACCAGCCATCAGCCCAGCACCTGTCAGGAATTATCCCGAAAAGTT
AA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-MluI

ACCN: NM_029426

Insert Size: 1962 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

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_029426.2, NP_083702.1
RefSeq Size:	4047 bp
RefSeq ORF:	1962 bp
Locus ID:	75770
UniProt ID:	Q69Z98
Cytogenetics:	7 F5
Gene Summary:	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. [UniProtKB/Swiss-Prot Function] Transcript Variant: This variant (1) lacks an alternate in-frame 3' exon and uses an alternate splice junction at the 5' end of the last exon compared to variant 3. The resulting isoform (alpha) has a shorter and distinct C-terminus compared to isoform gamma. Sequence Note: The RefSeq transcript and protein were derived from genomic sequence to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on alignments.