

Product datasheet for **SC101068**

BRSK2 (NM_003957) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	BRSK2 (NM_003957) Human Untagged Clone
Tag:	Tag Free
Symbol:	BRSK2
Synonyms:	C11orf7; PEN11B; SAD1; SADA; STK29
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF:

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>OriGene ORF sequence for NM_003957 edited
ATGACATCGACGGGAAGGACGGCGCGCAGCACGCGCAGTATGTTGGGCCCTACCGG
CTGGAGAAGACGCTGGGCAAGGGGCAGACAGGTCTGGTGAAGCTGGGGTTCACTGCGTC
ACCTGCCAGAAGTGGCCATCAAGATCGTCAACCGTGAGAAGCTCAGCGAGTCCGGTGTG
ATGAAGTGGAGCGGGAGATCGCGATCCTGAAGCTATTGAGCACCCACGTCCTAAAG
CTGCACGACGTTTATGAAAACAAAAAATATTTGTACCTGGTGTAGAACACGTGTCAGGT
GGTGAGCTCTTCGACTACCTGGTGAAGAAGGGGAGGCTGACGCCTAAGGAGGCTCGGAAG
TTCTTCCGGCAGATCATCTCTGCGCTGGACTTCTGCCACAGCCACTCCATATGCCACAGG
GATCTGAAACCTGAAAACCTCCTGCTGGACGAGAAGAACAACATCCGCATCGCAGACTTT
GGCATGGCGTCCCTGCAGGTTGGCGACAGCCTGTTGGAGACCAGCTGTGGGTCCCCCAC
TACGCTGCCCGAGGTGATCCGGGGGAGAAGTATGACGGCCGAAGGCGGACGTGTGG
AGCTGCGGCGTACCTGTTGCGCTTGTGGTGGGGCTCTGCCCTTCGACGATGACAAC
TTGCGACAGCTGTGGAGAAGGTGAAGCGGGGCTGTTCCACATGCCGACTTTATCCCG
CCCGACTGCCAGAGTCTGCTACGGGCGATGATCGAGGTGGACGCCGCACGCCCTCACG
CTAGAGCACATTCAGAAACACATATGGTATATAGGGGGCAAGAATGAGCCGAACAGAG
CAGCCCATTCTCGCAAGGTGCAGATCCGCTCGCTGCCAGCCTGGAGGACATCGACCCC
GACGTGTGGACAGCATGCACTCACTGGGCTGTTCCGAGACCGCAACAAGCTGTGTCAG
GACCTGTGTCCGAGGAGGAGAACCAGGAGAAGATGATTTACTTCTCCTCTGGACCGG
AAAGAAAGGTACCCGAGCCAGGAGGATGAGGACCTGCCCCCGGAACGAGATAGACCTT
CCCCGGAAGCGTGTGGACTCCCCGATGCTGAACCGGCACGGCAAGCGGCGGCCAGAACGC
AAGTCCATGGAGGTGCTCAGCGTGACGGACGGCGGCTCCCCGGTGCCTGCGCGGGGGCC
ATTGAGATGGCCAGCACGGCCAGAGGTCTCGTCCATCAGCGGTGCCTCCTCAGGCCTT
TCCACGCCCCTCAGCAGCCCCGGGTGACCCCTCACCCCTACCAAGGGGCGAGTCCC
CTCCCCACCCCAAGGGGACACCTGTCCACACGCCAAAGGAGAGCCCGGCTGGCAGGCC
AACCCACGCCCCGTCAGCCCCAGCGTCGGAGGGGTGCCCTGGAGGGCGGGTCAAC
TCCATCAAGAACAGCTTTCTGGGCTCACCCGCTTCCACCGCGGAAACTGCAAGTTCCG
ACGCCGGAGGAGATGTCCAACCTGACACCAGAGTCGTCACAGAGCTGGCGAAGAAGTCC
TGGTTTGGGAACCTCATCAGCCTGGAGAAGGAGGAGCAGATCTTCGTGGTCAAAAGAC
AAACCTCTGAGCTCCATCAAGGCTGACATCGTGCACGCCCTTCTGTGATTCCCAGTCTC
AGCCACAGCGTCACTCCCAAACGAGCTTCCGGGCGGAGTACAAGGCCACGGGGGGGCCA
GCCGTGTTCCAGAAGCCGGTCAAGTTCCAGGTTGATATCACCTACACGGAGGGTGGGGAG
GGCAGAAAGGAGAACGGCATCTACTCCGTACCTTACCCTGCTCTCAGGCCCCAGCCGT
CGTTCAAGAGGGTGGTGGAGACCATCCAGGCCAGCTGCTGAGCACACGACCCCGCT
GCGGCCAGCACTTGTGACAGACCACTAACTGTATGAAAATGATGACGGGGCGGCTTTCC
AAATGTGGAATTATCCCGAAAAGTTAA
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5' Read Nucleotide Sequence:

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>OriGene 5' read for NM_003957 unedited
CGGCACGAGGCCGGTTCGGCGCGGACGGCACTCGGCGGACGCGGGCGGACGCTGGGCGGC
CCCTCCCTGCCCGCGCGCCCGGGCGCCCTGGCCGGCGCCGGGCCCCAGAGCGATGACAT
CGACGGGAAGGACGGCGCGCGCAGCAGCGCAGTATGTTGGGCCCTACCGGCTGGAGA
AGACGCTGGGCAAGGGGCAGACAGGTCTGGTGAAGCTGGGGTTCACTGCGTCACCTGCC
AGAAGGTGGCCATCAAGATCGTCAACCGTGAGAAGCTCAGCGAGTCCGGTGTGATGAAGG
TGGAGCGGGAGATCGCGATCCTGAAGCTCATTGAGCACCCACGTCCTAAAGCTGCACG
ACGTTTATGAAAACAAAAAATATTTGTACCTGGTGTAGAACACGTGTCAGGTGGTGAAG
TCTTCGACTACCTGGTGAAGAAGGGGAGGCTGACGCCTAAGGAGGCTCGGAAGTTCTTCC
GGCAGATCATCTCTGCGCTGGACTTCTGCCACAGCCACTCCATATGCCACAGGGATCTGA
AACCTGAAAACCTCCTGCTGGACGAGAAGAACAACATCCGCATCGCAGACTTTGGCATGG
CGTCCCTGCAGGTTGGCGACAGCCTGTTGGAGACCAGCTGTGGGTCCCCCACTACGCTT
GCCCGAGGTGATCCGGNGGGAGAAGTATGACGGCCCGAAGGCGNACGTGTGGAGCTGCG
GCGTATCCTGTTGCGCTTGTGGTGGGGCTCTGCCCTTCGACGATGACAACTTGGCAG
AGCTGTGGAGAAGGTGAGCGGNGCGTGNACATGCCGCACTTTATCCGCGACTGCC
ANATCTGTAGGGCATGATCGAGGTGGAGCC
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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-529' and 'Ser-579'. Also regulates neuron polarization by mediating phosphorylation of WEE1 at 'Ser-642' in postmitotic 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-174 can inhibit insulin secretion (PubMed:22798068), BRSK2 phosphorylated at Thr-260 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 (2) uses an alternate splice site in the 3' coding region, which results in a frameshift, compared to variant 1. The encoded isoform (2) is shorter and has a distinct C-terminus, compared to isoform 1. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.