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Product datasheet for RG234690

BRSK2 (NM_001256629) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	BRSK2 (NM_001256629) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	BRSK2
Synonyms:	C11orf7; PEN11B; SAD1; SADA; STK29
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)

View online »

ORF Nucleotide Sequence:

>RG234690 representing NM_001256629
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGACATCGACGGGGAAGGACGGCGGCGCGCAGCACGCGCAGTATGTTGGGCCCTACCGGCTGGAGAAGA
CGCTGGGCAAGGGGCAGACAGGTCTGGTGAAGCTGGGGGTTCACTGCGTCACCTGCCAGAAGGTGGCCAT
CAAGATCGTCAACCGTGAGAAGCTCAGCGAGTCGGTGCTGATGAAGGTGGAGCGGGAGATCGCGATCCTG
AAGCTCATTGAGCACCCCCACGTCCTAAAGCTGCACGACGTTTATGAAAACAAAAAATATTTGTACCTGG
TGCTAGAACACGTGTCAGGTGGTGAGCTCTTCGACTACCTGGTGAAGAAGGGGAGGCTGACGCCTAAGGA
GGCTCGGAAGTTCTTCCGGCAGATCATCTCTGCGCTGGACTTCTGCCACAGCCACTCCATATGCCACAGG
GATCTGAAACCTGAAAACCTCCTGCTGGACGAGAAGAACAACATCCGCATCGCAGACTTTGGCATGGCGT
CCCTGCAGGTTGGCGACAGCCTGTTGGAGACCAGCTGTGGGTCCCCCCACTACGCCTGCCCCGAGGTGAT
CCGGGGGGAGAAGTATGACGGCCGGAAGGCGGACGTGTGGAGCTGCGGCGTCATCCTGTTCGCCTTGCTG
GTGGGGGCTCTGCCCTTCGACGATGACAACTTGCGACAGCTGCTGGAGAAGGTGAAGCGGGGCGTGTTCC
ACATGCCGCACTTTATCCCGCCCGACTGCCAGAGTCTGCTACGGGGCATGATCGAGGTGGACGCCGCACG
CCGCCTCACGCTAGAGCACATTCAGAAACACATATGGTATATAGGGGGCAAGAATGAGCCCGAACCAGAG
CAGCCCATTCCTCGCAAGGTGCAGATCCGCTCGCTGCCCAGCCTGGAGGACATCGACCCCGACGTGCTGG
ACAGCATGCACTCACTGGGCTGCTTCCGAGACCGCAACAAGCTGCTGCAGGACCTGCTGTCCGAGGAGGA
GAACCAGGAGAAGATGATTTACTTCCTCCTCCTGGACCGGAAAGAAAGGTACCCGAGCCAGGAGGATGAG
GACCTGCCCCCCCGGAACGAGATAGACCCTCCCCGGAAGCGTGTGGACTCCCCGATGCTGAACCGGCACG
GCAAGCGGCGGCCAGAACGCAAATCCATGGAGGTGCTCAGCGTGACGGACGGCGGCTCCCCGGTGCCTGC
GCGGCGGGCCATTGAGATGGCCCAGCACGGCCAGAGGTCTCGGTCCATCAGCGGTGCCTCCTCAGGCCTT
TCCACCAGCCCACTCAGCAGCCCCCGGGTGACCCCTCACCCCTCACCAAGGGGCAGTCCCCTCCCCACCC
CCAAGGGGACACCTGTCCACACGCCAAAGGAGAGCCCGGCTGGCACGCCCAACCCCACGCCCCCGTCCAG
CCCCAGCGTCGGAGGGGTGCCCTGGAGGGCGCGGCTCAACTCCATCAAGAACAGCTTTCTGGGCTCACCC
CGCTTCCACCGCCGGAAACTGCAAGTTCCGACGCCGGAGGAGATGTCCAACCTGACACCAGAGTCGTCCC
CAGAGCTGGCGAAGAAGTCCTGGTTTGGGAACTTCATCAGCCTGGAGAAGGAGGAGCAGATCTTCGTGGT
CATCAAAGACAAACCTCTGAGCTCCATCAAGGCTGACATCGTGCACGCCTTCCTGTCGATTCCCAGTCTC
AGCCACAGCGTCATCTCCCAAACGAGCTTCCGGGCCGAGTACAAGGCCACGGGGGGGCCAGCCGTGTTCC
AGAAGCCGGTCAAGTTCCAGGTTGATATCACCTACACGGAGGGTGGGGAGGCGCAGAAGGAGAACGGCAT
CTACTCCGTCACCTTCACCCTGCTCTCAGGCCCCAGCCGTCGCTTCAAGAGGGTGGTGGAGACCATCCAG
GCCCAGCTGCTGAGCACACACGACCCGCCTGCGGCCCAGCACTTGTCAGAACCCCCCCCACCAGCGCCAG
GACTAAGCTGGGGTGCTGGGCTTAAGGGCCAGAAGGTGGCCACCAGCTACGAGAGTAGCCTC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

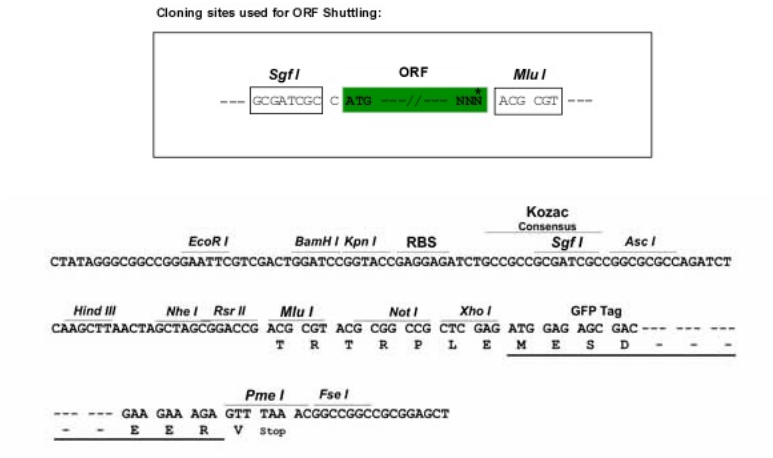
>RG234690 representing NM_001256629
Red=Cloning site Green=Tags(s)

MTSTGKDGGAQHAQYVGPYRLEKTLGKGQTGLVKLGVHCVTCQKVAIKIVNREKLSESVLMKVEREIAIL
KLIEHPHVLKLHDVYENKKYLYLVLEHVSGGELFDYLVKKGRLTPKEARKFFRQIISALDFCHSHSICHR
DLKPENLLLDEKNNIRIADFGMASLQVGDSLLETSCGSPHYACPEVIRGEKYDGRKADVWSCGVILFALL
VGALPFDDDNLRQLLEKVKRGVFHMPHFIPPDCQSLLRGMIEVDAARRLTLEHIQKHIWYIGGKNEPEPE
QPIPRKVQIRSLPSLEDIDPDVLDSMHSLGCFRDRNKLLQDLLSEEENQEKMIYFLLLDRKERYPSQEDE
DLPPRNEIDPPRKRVDSPMLNRHGKRRPERKSMEVLSVTDGGSPVPARRAIEMAQHGQRSRSISGASSGL
STSPLSSPRVTPHPSPRGSPLPTPKGTPVHTPKESPAGTPNPTPPSSPSVGGVPWRARLNSIKNSFLGSP
RFHRRKLQVPTPEEMSNLTPESSPELAKKSWFGNFISLEKEEQIFVVIKDKPLSSIKADIVHAFLSIPSL
SHSVISQTSFRAEYKATGGPAVFQKPVKFQVDITYTEGGEAQKENGIYSVTFTLLSGPSRRFKRVVETIQ
AQLLSTHDPPAAQHLSEPPPPAPGLSWGAGLKGQKVATSYESSL

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001256629

ORF Size: 2022 bp

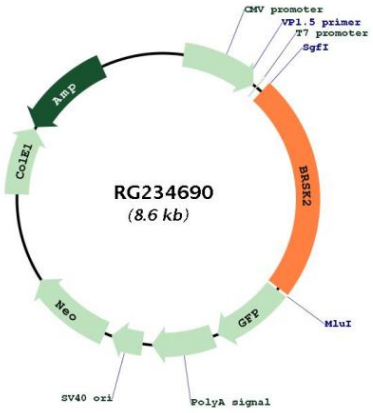
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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:	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_001256629.2
RefSeq Size:	4140 bp
RefSeq ORF:	2025 bp
Locus ID:	9024
UniProt ID:	Q8IWQ3
Cytogenetics:	11p15.5
Protein Families:	Druggable Genome, Protein Kinase
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]

Product images:



Circular map for RG234690