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Product datasheet for SC323501

RIOK2 (NM_018343) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	RIOK2 (NM_018343) Human Untagged Clone
Tag:	Tag Free
Symbol:	RIOK2
Synonyms:	RIO2
Mammalian Cell Selection:	None
Vector:	pCMV6-XL4
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF:

>OriGene ORF within SC323501 sequence for NM_018343 edited (data generated by NextGen Sequencing)
ATGGGGAAAGTGAATGTGGCCAAGTTGCGTTACATGAGCCGAGATGACTTCAGGGTCTTG
ACCGCGGTTGAAATGGGCATGAAGAACCATGAAATTGTTCCCGGCAGTTTGATTGCTTCT
ATAGCCAGCCTTAAACATGGTGGCTGTAATAAAGTTTTAAGAGAATTAGTGAAACATAAA
CTCATAGCTTGGGAGCGTACCAAAACTGTCCAGGGCTATCGGTTGACAAATGCAGGATAT
GATTACCTAGCTTTGAAAACACTTTCTTCTAGGCAAGTAGTTGAGTCTGTTGGAAACCAG
ATGGGTGTTGGCAAAGAATCAGATATTTACATTGTTGCAAATGAAGAAGGACAACAATTT
GCATTAAAGCTTCACAGACTAGGAAGAACCTCGTTTCGAAATTTGAAAAACAAACGCGAT
TATCATAAACATAGGCACAATGTGTCTTGGCTTTATTTATCTCGTCTCTCTGCCATGAAG
GAATTTGCCTATATGAAGGCATTGTATGAGAGGAAATTTCCAGTTCCAAAGCCAATTGAT
TACAATCGTCATGCAGTGGTCATGGAACTCATAAATGGTTATCCACTATGTCAGATACAC
CATGTTGAAGATCCTGCATCAGTATATGATGAAGCTATGGAACTAATTGTCAAACTTGCA
AATCATGGGCTGATTCATGGAGCKTTTAATGAATTTAATCTCATTTTGGATGAAAGTGAC
CATATCACCATGATTGATTTTCCACAGATGGTTTCAACTTCTCATCCCAATGCTGAGTGG
TATTTTGACAGAGATGTTAAATGCATTAAAGATTTCTTTATGAAACGTTTCAGCTACGAA
AGTGAGCTTTTTCCAACTTTTAAGGATATCAGGAGAGAAGACACTCTTGATGTGGAGGTT
TCTGCCAGTGGCTACACAAAGGAAATGCAGGCAGATGATGAACTGCTTCATCCATTAGGT
CCAGATGATAAAAATATTGAAACAAAAGAGGGATCTGAATTCTCATTTTCAGATGGAGAA
GTGGCAGAAAAAGCAGAGGTTTACAGGTCAGAAAATGAAAGTGAACGGAACTGTCTAGAA
GAATCAGAGGGCTGCTATTGCAGATCATCTGGAGACCCTGAACAAATAAAGGAAGACAGT
TTATCAGAAGAGAGTGCTGATGCACGGAGTTTTGAAATGACTGAATTCAATCAAGCTTTA
GAAGAAATAAAAGGGCAGGTTGTTGAAAACAACTCTGTAACTGAATTTTCTGAGGAGAAA
AACAGAACTGAAAATTACAACAGGCAAGATGGTCAGAGAGTTCAAGGAGGAGTCCCTGCT
GGCTCTGACGAGTATGAAGATGAATGCCCTCATCTAATTGCCTTGTCGTCATTAAATAGA
GAATTCAGGCCTTTCAGAGATGAAGAAAATGTGGGAGCTATGAATCAGTATAGAACAAGA
ACTCTGAGTATCACTTCTTCAGGCAGTGCTGTAAGCTGTTCAACAATTCCTCCAGAACTG
GTGAAACAGAAGGTGAAACGTCAGTTGACAAAACAGCAAAAATCAGCTGTCAGACGTCGA
TTGCAGAAAGGAGAAGCAAATATATTTACCAAGCAACGTAGGGAAAACATGCAAAATATC
AAATCAAGTTTGGAAGCAGCTAGCTTTTGGGGAGAATAA

Clone variation with respect to NM_018343.2
447 a=>t;453 a=>t;683 a=>c;684 t=>k;1045 g=>a;1641 c=>t

5' Read Nucleotide Sequence:

>OriGene 5' read for mutant NM_018343 unedited
CCCGCCCGTTCAGCAATGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGA
ACCGTCAGAATTTTGTAATACGACTCACTATAGGGCGGCCGCGAATTCGGCACGAGGGTCGTCGGAGAGG
CATCTGGGTTCGGACTGGGGCCGCCATGGGGAAAGTGAATGTGGCCAAGTTGCGTTACATGAGCCGAGAT
GACTTCAGGGTCTTGACCGCGGTTGAAATGGGCATGAAGAACCATGAAATTGTTCCCGGCAGTTTGATTG
CTTCTATAGCCAGCCTTAAACATGGTGGCTGTAATAAAGTTTTAAGAGAATTAGTGAAAACATAAACTCA
TAGCTTGGGGAGCGTACCCAAAACTGTCCAGGGCTATCGGTTGACAAATGCAGGATATGATTACCTAGCT
TTGAAAACCCTTTTCTTCTAGGCAAGTAGTTGAGTCCGGTGGAAACCCAGAGGGTGGTTGGCAAAGAATC
AGATATTAAATGGTGCAAAGGAGAAGGGACAACATTTCCTTAAACCTCACACATAGAAAAACCCTGTTCC
AATTTGAAAACACAACGCATATATAAACCTAGGCCATGTGGCTGGCTAATTATCTCTCATGGCCGAGAGA
TTCCTATAAGCCTGTGAGAGAGAATCCGTTCAACGAAGTGATCACACACCACC

Kinase Domain Sequence:

>SC323501 kinase domain raw sequence. By performing BLASTX analysis with this sequence against NCBI refernce protein database, you can confirm the presence of the kinase-deficient mutation
GWCCCATGTTGAGWCCTGCATCAGTATATGATGAAGCTATGGAACTAATTGTCAAACTTGCAAATCATGG
GCTGATTCATGGAGCGTTTAATGAATTTAATCTCATTTTGGATGAAAGTGACCATATCACCATGATTGAT
TTTCCACAGATGGTTTCAACTTCTCATCCCAATGCTGAGTGGTATTTTGACAGAGATGTTAAATGCATTA
AAGATTTCTTTATGAAACGTTTCAGCTACGAAAGTGAGCTTTTTC

Restriction Sites:	Please inquire
ACCN:	NM_018343
Insert Size:	2110 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).
OTI Annotation:	This kinase-deficient mutant clone was generated by created by site-directed mutagenesis from the corresponding wild-type clone. See details in "Application of active and kinase-deficient kinome collection for identification of kinases regulating hedgehog signaling." Cell. 2008 May p536-548.
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_018343.1, NP_060813.1
RefSeq Size:	1832 bp
RefSeq ORF:	1659 bp
Locus ID:	55781
UniProt ID:	Q9BVS4
Cytogenetics:	5q15
Domains:	RIO
Protein Families:	Druggable Genome, Protein Kinase

Gene Summary: Serine/threonine-protein kinase involved in the final steps of cytoplasmic maturation of the 40S ribosomal subunit. Involved in export of the 40S pre-ribosome particles (pre-40S) from the nucleus to the cytoplasm. Its kinase activity is required for the release of NOB1, PNO1 and LTV1 from the late pre-40S and the processing of 18S-E pre-rRNA to the mature 18S rRNA (PubMed:19564402). Regulates the timing of the metaphase-anaphase transition during mitotic progression, and its phosphorylation, most likely by PLK1, regulates this function (PubMed:21880710).[UniProtKB/Swiss-Prot Function]
Transcript Variant: This variant (1) represents the longer transcript and encodes the longer 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.