

Product datasheet for **SC323419**

RAF1 (NM_002880) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	RAF1 (NM_002880) Human Untagged Clone
Tag:	Tag Free
Symbol:	RAF1
Synonyms:	c-Raf; CMD1NN; CRAF; NS5; Raf-1
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



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Fully Sequenced ORF: >NCBI ORF sequence for NM_002880, the custom clone sequence may differ by one or more nucleotides

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ATGGAGCACATACAGGGAGCTTGAAGACGATCAGCAATGGTTTTGGATTCAAAGATGCCGTGTTTGATG
GCTCCAGTGCATCTCTCTACAATAGTTCAGCAGTTTGGCTATCAGCGCCGGGCATCAGATGATGGCAA
ACTCACAGATCCCTTAAGACAAGCAACTATCCGTGTTTTCTTGCCGAACAAGCAAGAACAGTGGTC
AATGTGCGAAATGGAATGAGCTTGATGACTGCCTTATGAAAGCACTCAAGGTGAGGGGCCGCAACCAG
AGTGCTGTGCAGTGTTCCAGACTTCTCCACGAACACAAAGGTAAAAAGCACGCTTAGATTGGAATACTGA
TGCTGCGTCTTTGATTGGAGAAGAACTCAAGTAGATTTCTGGATCATGTTCCCTCACAACACACAAC
TTTGCTCGGAAGACGTTCTGAAGCTTGCCTTCTGTGACATCTGTGAGAAATTCCTGCTCAATGGATTTT
GATGTCAGACTTGTGGCTACAAATTTTCATGAGCACTGTAGCACCAGTACCTACTATGTGTGGACTG
GAGTAACATCAGACAACCTTATTGTTTCAAATTCCTACTTGGTGATAGTGGAGTCCCAGCACTACCT
TCTTTGACTATGCGTCGATGCGAGAGTCTGTTCCAGGATGCCTGTAGTTCTCAGCACAGATATTCTA
CACCTCAGCCTTACCTTTAACACCTCCAGTCCCTCATCTGAAGTTCCCTCTCCAGAGGCAGAGGTC
GACATCCACACCTAATGTCCACATGGTCAGCACCACCCTGCCTGTGGACAGCAGGATGATTGAGGATGCA
ATTCGAAGTCACAGCGAATCAGCCTCACCTTCCAGCCTGTCCAGTAGCCCCAACAAATCTGAGCCCAACAG
GCTGGTCACAGCCGAAAACCCCGTGCCAGCACAAAGAGAGCGGGCACCAGTATCTGGGACCCAGGAGAA
AAACAAAATTAGGCCTCGTGGACAGAGAGATTCAGCTATTATTGGGAAATAGAAGCCAGTGAAGTGATG
CTGTCCACTCGGATTGGGTGAGGCTCTTTTGAAGTGTATAAGGGTAAATGGCACGGAGATGTTGCAG
TAAAGATCCTAAAGTTGTCGACCAACCCAGAGCAATCCAGGCTTCAGGAATGAGGTGGCTGTTCT
GCGCAAAACACGGCATGTGAACATTCTGCTTTTCATGGGTACATGACAAAGGACAACCTGGCAATTGTG
ACCCAGTGGTGGAGGGCAGCAGCCTCTACAAACACCTGCATGTCCAGGAGACCAAGTTTCAGATGTTCC
AGCTAATTGACATTGCCGGCAGACGGCTCAGGGAATGGACTATTTGCATGCAAAGAACATCATCCATAG
AGACATGAAATCCAACAATATATTTCTCCATGAAGGCTTAAACAGTGAAAATTGGAGATTTTGGTTGGCA
ACAGTAAAGTCACGCTGGAGTGGTTCTCAGCAGGTTGAACAACCTACTGGCTCTGTCTCTGGATGGCC
CAGAGGTGATCCGAATGCAGGATAACAACCCATTAGTTTCCAGTCGGATGTCTACTCTATGGCATCGT
ATTGTATGAACTGATGACGGGGAGCTTCTTATTCTCACATCAACAACCCAGATCAGATCATCTTCATG
GTGGCCGAGGATATGCCTCCCCAGATCTTAGTAAGCTATATAAGAACTGCCCCAAGCAATGAAGAGGC
TGGTAGCTGACTGTGTGAAGAAAGTAAAGGAAGAGAGGCCTCTTTTCCCAGATCTGTCTTCCATTGA
GCTGCTCAACACTCTTACCGAAGATCAACCGGAGCGCTCCGAGCCATCCTTGATCGGGCAGCCAC
ACTGAGGATATCAATGCTTGACGCTGACCACGTCCCGAGGCTGCCTGTCTTAG
    
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5' Read Nucleotide Sequence:

>OriGene 5' read for mutant NM_002880 unedited

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ACCGCCGTCTGAGCAATGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTG
AACCGTCAGAATTTTGTAAATACGACTCACTATAGGGCGGCGCAATTCGGCACGAGGCTGGCTCCCTCA
GGTTTAAGAAATTTTAAAGCTGCATCAATGGAGCACATACAGGGAGCTTGGAAAGACGATCAGCAATGGTT
TTGGATTCAAAGATGCCGTGTTTGGATGGCTCCAGCTGCATCTCTCTACAATAGTTCAGCAGTTTGGCTA
TCAGCGCCGGGCATCAGATGATGGCAAACCTCACAGATCCTTCTAAGACAAGCAACTATCCGTGTTTTT
TTGCCGAAAAGCAAGGACAGTGTAAAAAACCCCTAAAATGGGATTACTGATGCTGCGTCTTTGATTG
GAGAAAAACCTTCAAGTAGATTTCCGGATCCTGGGTTCCCTCACAAACCCCAATTTGGCCGAAGAAC
TTTCTGGAAGCCTGGCCTTCGGTGAATTTGGTCAAAAATTCCTCGGCTAAGGGGTTTTGAAGTTCAACT
GGGGGGCTCCAATTTTTTGAACCCGGACCCCAATTCCTCCCTGTGTGTGGGGCCGGGATAAATCCA
CAAAACTTTTTTTTTTCCAAATTTCCATTTGGGGGATGGGGTCCCAACCTCCCTTTTTTAAAAGGC
CTTTTGGGGAGATGGTTTTTACGGAGCGGTGGTTTTTAAAAAAAATTTTACAGCCCCCTATCCTTT
TTGAGCCCGCTCTTGTAGGGGGCCCTCCCAAGAGGGAGGGAGACACAT
    
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Kinase Domain Sequence:	>SC323419 kinase domain raw sequence. By performing BLASTX analysis with this sequence against NCBI reference protein database, you can confirm the presence of the kinase-deficient mutation AMRCKCAGTGWGCTGTCACCTCGGATTGGGTCAGGCTCTTTTGGAACTGTTTATAAGGGTAAATGGCACGG AGATGTTGCAGTAATGATCCTAAAGTTGTCGACCCAACCCAGAGCAATTCCAGGCCTTCAGGAATGAG GTGGCTGTTCTGCGCAAAACACGGCATGTGAACATTCTGCTTTTCATGGGGTACATGACAAAGGACAACC TGGCAATTGTGACCCAGTGGTGGCAGGGCAGCAGCCTCTACAAAC
Restriction Sites:	Please inquire
ACCN:	NM_002880
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:	<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:	NM_002880.2 , NP_002871.1
RefSeq Size:	3245 bp
RefSeq ORF:	1947 bp
Locus ID:	5894
UniProt ID:	P04049
Cytogenetics:	3p25.2
Domains:	pkinase, TyrKc, DAG_PE-bind, S_TKc, RBD
Protein Families:	Druggable Genome, Protein Kinase

Protein Pathways:

Acute myeloid leukemia, B cell receptor signaling pathway, Bladder cancer, Chemokine signaling pathway, Chronic myeloid leukemia, Colorectal cancer, Endometrial cancer, ErbB signaling pathway, Fc epsilon RI signaling pathway, Fc gamma R-mediated phagocytosis, Focal adhesion, Gap junction, Glioma, GnRH signaling pathway, Insulin signaling pathway, Long-term depression, Long-term potentiation, MAPK signaling pathway, Melanogenesis, Melanoma, Natural killer cell mediated cytotoxicity, Neurotrophin signaling pathway, Non-small cell lung cancer, Pancreatic cancer, Pathways in cancer, Progesterone-mediated oocyte maturation, Prostate cancer, Regulation of actin cytoskeleton, Renal cell carcinoma, T cell receptor signaling pathway, Vascular smooth muscle contraction, VEGF signaling pathway

Gene Summary:

This gene is the cellular homolog of viral raf gene (v-raf). The encoded protein is a MAP kinase kinase kinase (MAP3K), which functions downstream of the Ras family of membrane associated GTPases to which it binds directly. Once activated, the cellular RAF1 protein can phosphorylate to activate the dual specificity protein kinases MEK1 and MEK2, which in turn phosphorylate to activate the serine/threonine specific protein kinases, ERK1 and ERK2. Activated ERKs are pleiotropic effectors of cell physiology and play an important role in the control of gene expression involved in the cell division cycle, apoptosis, cell differentiation and cell migration. Mutations in this gene are associated with Noonan syndrome 5 and LEOPARD syndrome 2. [provided by RefSeq, Jul 2008]

Transcript Variant: This variant (2), as well as variant 3, encodes isoform b.