

Product datasheet for **SC118322**

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-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_002880 edited
ATGGAGCACATACAGGGAGCTTGGAAAGACGATCAGCAATGGTTTTGGATTCAAAGATGCC
GTGTTTGTATGGCTCCAGCTGCATCTCTCCTACAATAGTTCAGCAGTTTGGCTATCAGCGC
CGGGCATCAGATGATGGCAAACACAGATCCTTCTAAGACAAGCAACTATCCGTGTT
TTCTTGCCGAACAAGCAAAGAACAGTGGTCAATGTGCGAAATGGAATGAGCTTGCATGAC
TGCCTTATGAAAGCACTCAAGGTGAGGGGCTGCAACCAGAGTGTGTGCAGTGTTCAGA
CTTCTCCACGAACACAAAGGTAAGGTAAGGTAAGGTAAGGTAAGGTAAGGTAAGGTAAGG
TTGATTGGAGAAGAACTTCAAGTAGATTTCTGGATCATGTTCCCTCACAAACACACAAC
TTTGCTCGGAAGACGTTCTGAAGCTTGCCTTCTGTGACATCTGTCAGAAATTCCTGCTC
AATGGATTTTCGATGTCAGACTTGTGGCTACAAATTTTCATGAGCACTGTAGCACCAAAGTA
CCTACTATGTGTGGACTGGAGTAACATCAGACAACCTTATTGTTTCCAAATCCACT
ATTGGTGATAGTGGAGTCCAGCACTACCTTCTTGTACTATGCGTCGATGCGAGAGTCT
GTTTCCAGGATGCCTGTTAGTTCTCAGCACAGATATTCTACACCTCACGCCTTACCTTT
AACACCTCCAGTCCCTCATCTGAAGTTCCTCTCCAGAGGCAGAGGTGCATCCACA
CCTAATGTCCACATGGTCAAGCACCCTGCCTGTGGACAGCAGGATGATTGAGGATGCA
ATTCGAAGTCAAGCAATCAGCCTCACCTTCCAGCCTGTCCAGTAGCCCAACAATCTG
AGCCCAACAGGCTGGTCAAGCCGAAAACCCCGTCCAGCACAAAGAGAGCGGGCACCA
GTATCTGGGACCCAGGAGAAAAACAAATTAGGCCTCGTGGACAGAGAGATTCAAGCTAT
TATTGGGAAATAGAAGCCAGTGAAGTGTGCTGTCCACTCGGATTGGGTCAGGCTCTTTT
GGAAGTGTATAAAGGTAAATGGCACGGAGATGTTGCAGTAAAGATCCTAAAGTTGTC
GACCAACCCAGAGCAATTCAGGCCTTCAGGAATGAGGTGGCTGTTCTGCGCAAAACA
CGGCATGTGAACATTCTGCTTTTTCATGGGTACATGACAAAGGACAACCTGGCAATTGTG
ACCCAGTGGTGGAGGGCAGCAGCCTCTACAAACACCTGCATGTCCAGGAGACCAAGTT
CAGATGTTCCAGTAATTGACATTCGCCGAGCAGCGCTCAGGGAATGGACTATTTGCAT
GCAAAGAACATCATCCATAGAGACATGAAATCCAACAATATATTTCTCCATGAAGCTTA
ACAGTGAATTTGGAGATTTTGGTTTGGCAACAGTAAAGTACGCTGGAGTGGTCTCAG
CAGGTTGAACAACCTACTGGCTCTGTCTCTGGATGGCCCGAGAGGTGATCCGAATGCAG
GATAACAACCCATTAGTTCAGTTCAGTGGATGTCTACTCCTATGGCATCGTATTGTATGAA
CTGATGACGGGGAGCTTCTTATTCTCACATCAACAACCGAGATCAGATCATCTTCATG
GTGGCCGAGGATATGCCTCCCGAGATCTTAGTAAGCTATATAAGAACTGCCCAAGCA
ATGAAGAGGCTGGTAGCTGACTGTGTAAGAAAGTAAAGGAAGAGAGGCCTCTTTTCCC
CAGATCCTGTCTTCCATTGAGCTGCTCCAAACACTCTACCGAAGATCAACCGGAGCGCT
TCCGAGCCATCCTTGCATCGGGCAGCCCACTGAGGATATCAATGCTTGCACGCTGACC
ACGTCCCCGAGGCTGCCTGTCTTCTAG
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5' Read Nucleotide Sequence:

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>OriGene 5' read for NM_002880 unedited
TTGGTTTTGTATCCGACTTCTATAGGCGGCCGGAATTCGGCACGAGCCGATGTGACCCG
CTCCCCTCCCTACCCGCGCGGGGAGGAGGAGCGGGCAGAAGCTGCCGCCAAGCAGC
AGGACGTTGGGGCGGCCTGGCTCCCTCAGGTTTAAAGATTGTTTAAAGCTGCATCAATGGA
GCACATACAGGGAGCTTGGAAAGACGATCAGCAATGGTTTTGGATTCAAAGATGCCGTGTT
TGATGGCTCCAGCTGCATCTCTCCTACAATAGTTCAGCAGTTTGGCTATCAGCGCCGGGC
ATCAGATGATGGCAAACACAGATCCTTCTAAGACAAGCAACTATCCGTGTTTTCTT
GCCGAACAAGCAAAGAACAGTGGTCAATGTGCGAAATGGAATGAGCTTGCATGACTGCCT
TATGAAAGCACTCAAGGTGAGGGGCTGCAACCAGAGTGTGTGCAGTGTTCAGACTTCT
CCACGAACACAAAGGTAAGGTAAGGTAAGGTAAGGTAAGGTAAGGTAAGGTAAGGTAAGG
ATTGGNNAGAAGAACTTCAAGTAGATTTCTGGATCATGTTCCCTCACAAACACACAAC
TTGCTCGGAAGACGTTCTGAAGCTTGCCTTCTGTGACATCTGTCAGAAATTCCTGCTAA
TGGATTTTCGATGTCAGACTTGTGGCTACAAATTTTCATGAGCACTGTAGCACCAAAGTAC
CTACTATGTGTGGTAGACCTTGGAGTAACCATCAGACAACCTTATTGTTTCCAAATTC
ACTATTGGTGATAGTGGGAGTCCAGCCCTACCTTCTTAGACTTTGCGTCGTTTGGCAGA
GTCTGTTTCCAGATGCCTGTTAGTTTTTCCAGACAGATTTTCTACCTCACGCCTTACCTT
AACACCTCCGTCCTCTTGAAGGTCCTCTCCAGAGGCAGAGGTGATTCCT
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3' Read Nucleotide Sequence:	>OriGene 3' read for NM_002880 unedited TGAGGAAGTGGGTACAGTGGCATGCCCACTCCGGTGTATCTGTATCAGGAAAACAGTCT ATGCACTCGCGCGCCCGCAATACTAGTAGTACGAGCTTTTTCTTTTTTTCTTTTTTAAA TTAATTTATTTTATAAAAATAACATATTTGAGGGACCATCATATAACTGTTTTTTGTCA GGTGCAATAAAAAACAAAATTAATTTTTTTTTTTCATCAAGAAAACCTGTTTTCTGGCTTCC TTGTATACACATGATGTGACTAAGAAAAACAAGGCTGTTTGTGTTTGTGTTGATAAAAA ACAAGGCTGGCCCTGCGGCCCGCCCATAGGGGCAGCTCCTGGAAGACAAAATTCAGC ATGATGGAAGACTGCTCCCTGAGAGGGCTGATATGCGGATTGGCCGAGTGCCTTGCCTGG AAAACCATCCCAATGCACTGGACACCTTATAATCTGTGAAAGGAGGACGTGTCCCCTAAG AAAAGTCCATAGTACCAAAGCAGGCTCCTTCGGGCGGCCAGAGTCTCGGCAGTCTGGG CTGTTTGGTGCCTTATGTGCAAAATGTCTGGCGCTGCACCACTCTCTGAAGAAAGTCCCG CCTGTGACATGCATTCTCCAGAAGCTGATTTCCAAAATCCCATGTGTCTCCACATCATG GCTGGACTGCCTGCTACCTTACTTCTCTAAATACTCATGTACCCAACAGCTGGGGCTGG GCCCTGCTTTTTGTCTACCATCAACATCCACTTGCGCATCTACAGAAAGCTGGGCCCTT GAGCATGGGGTATGTGGGGAGGGAGCAAGACACACCAGCACTGGATATGGCTTCCCTTTT CCAGGGCCCATGGGNTTGAAAAAAGGCAATATTATTTTATGCCA
Restriction Sites:	NotI-NotI
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).
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:	<u>NM_002880.2</u> , <u>NP_002871.1</u>
RefSeq Size:	3245 bp
RefSeq ORF:	1947 bp
Locus ID:	5894
UniProt ID:	<u>P04049</u>
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.