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Product datasheet for SC323771

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:	Neomycin
Vector:	pCMV6-AC (PS100020)
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF:

>OriGene sequence for NM_002880.2
TCGCGGGCGCTTGGGCCGCCATCTTAGATGGCGGGAGTAAGAGGAAAACGATTGTGAGGC
GGGAACGGCTTTCTGCTGCCTTTTTTGGGCCCCGAAAAGGGTCAGCTGGCCGGGCTTTGG
GGCGCGTGCCCTGAGGCGCGGAGCGCGTTTGCTACGATGCGGGGGCTGCTCGGGGCTCCG
TCCCCTGGGCTGGGGACGCGCCGAATGTGACCGCCTCCCGCTCCCTCACCCGCCGCGGGG
AGGAGGAGCGGGCGAGAAGCTGCCGCCGAACGACAGGACGTTGGGGCGGCCTGGCTCCCT
CAGGTTTAAGAATTGTTTAAGCTGCATCAATGGAGCACATACAGGGAGCTTGGAAGACGA
TCAGCAATGGTTTTGGATTCAAAGATGCCGTGTTTGATGGCTCCAGCTGCATCTCTCCTA
CAATAGTTCAGCAGTTTGGCTATCAGCGCCGGGCATCAGATGATGGCAAACTCACAGATC
CTTCTAAGACAAGCAACACTATCCGTGTTTTCTTGCCGAACAAGCAAAGAACAGTGGTCA
ATGTGCGAAATGGAATGAGCTTGCATGACTGCCTTATGAAAGCACTCAAGGTGAGGGGCC
TGCAACCAGAGTGCTGTGCAGTGTTCAGACTTCTCCACGAACACAAAGGTAAAAAAGCAC
GCTTAGATTGGAATACTGATGCTGCGTCTTTGATTGGAGAAGAACTTCAAGTAGATTTCC
TGGATCATGTTCCCCTCACAACACACAACTTTGCTCGGAAGACGTTCCTGAAGCTTGCCT
TCTGTGACATCTGTCAGAAATTCCTGCTCAATGGATTTCGATGTCAGACTTGTGGCTACA
AATTTCATGAGCACTGTAGCACCAAAGTACCTACTATGTGTGTGGACTGGAGTAACATCA
GACAACTCTTATTGTTTCCAAATTCCACTATTGGTGATAGTGGAGTCCCAGCACTACCTT
CTTTGACTATGCGTCGTATGCGAGAGTCTGTTTCCAGGATGCCTGTTAGTTCTCAGCACA
GATATTCTACACCTCACGCCTTCACCTTTAACACCTCCAGTCCCTCATCTGAAGGTTCCC
TCTCCCAGAGGCAGAGGTCGACATCCACACCTAATGTCCACATGGTCAGCACCACCCTGC
CTGTGGACAGCAGGATGATTGAGGATGCAATTCGAAGTCACAGCGAATCAGCCTCACCTT
CAGCCCTGTCCAGTAGCCCCAACAATCTGAGCCCAACAGGCTGGTCACAGCCGAAAACCC
CCGTGCCAGCACAAAGAGAGCGGGCACCAGTATCTGGGACCCAGGAGAAAAACAAAATTA
GGCCTCGTGGACAGAGAGATTCAAGCTATTATTGGGAAATAGAAGCCAGTGAAGTGATGC
TGTCCACTCGGATTGGGTCAGGCTCTTTTGGAACTGTTTATAAGGGTAAATGGCACGGAG
ATGTTGCAGTAAAGATCCTAAAGGTTGTCGACCCAACCCCAGAGCAATTCCAGGCCTTCA
GGAATGAGGTGGCTGTTCTGCGCAAAACACGGCATGTGAACATTCTGCTTTTCATGGGGT

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ACATGACAAAGGACAACCTGGCAATTGTGACCCAGTGGTGCGAGGGCAGCAGCCTCTACA
AACACCTGCATGTCCAGGAGACCAAGTTTCAGATGTTCCAGCTAATTGACATTGCCCGGC
AGACGGCTCAGGGAATGGACTATTTGCATGCAAAGAACATCATCCATAGAGACATGAAAT
CCAACAATATATTTCTCCATGAAGGCTTAACAGTGAAAATTGGAGATTTTGGTTTGGCAA
CAGTAAAGTCACGCTGGAGTGGTTCTCAGCAGGTTGAACAACCTACTGGCTCTGTCCTCT
GGATGGCCCCAGAGGTGATCCGAATGCAGGATAACAACCCATTCAGTTTCCAGTCGGATG
TCTACTCCTATGGCATCGTATTGTATGAACTGATGACGGGGGAGCTTCCTTATTCTCACA
TCAACAACCGAGATCAGATCATCTTCATGGTGGGCCGAGGATATGCCTCCCCAGATCTTA
GTAAGCTATATAAGAACTGCCCCAAAGCAATGAAGAGGCTGGTAGCTGACTGTGTGAAGA
AAGTAAAGGAAGAGAGGCCTCTTTTTCCCCAGATCCTGTCTTCCATTGAGCTGCTCCAAC
ACTCTCTACCGAAGATCAACCGGAGCGCTTCCGAGCCATCCTTGCATCGGGCAGCCCACA
CTGAGGATATCAATGCTTGCACGCTGACCACGTCCCCGAGGCTGCCTGTCTTCTAGTTGA
CTTTGCACCTGTCTTCAGGCTGCCAGGGGAGGAGGAGAAGCCAGCAGGCACCACTTTTCT
GCTCCCTTTCTCCAGAGGCAGAACACATGTTTTCAGAGAAGCTGCTGCTAAGGACCTTCT
AGACTGCTCACAGGGCCTTAACTTCATGTTGCCTTCTTTTCTATCCCTTTGGGCCCTGGG
AGAAGGAAGCCATTTGCAGTGCTGGTGTGTCCTGCTCCCTCCCCACATTCCCCATGCTCA
AGGCCCAGCCTTCTGTAGATGCGCAAGTGGATGTTGATGGTAGTACAAAAAGCAGGGGCC
CAGCCCCAGCTGTTGGCTACATGAGTATTTAGAGGAAGTAAGGTAGCAGGCAGTCCAGCC
CTGATGTGGAGACACATGGGATTTTGGAAATCAGCTTCTGGAGGAATGCATGTCACAGGC
GGGACTTTCTTCAGAGAGTGGTGCAGCGCCAGACATTTTGCACATAAGGCACCAAACAGC
CCAGGACTGCCGAGACTCTGGCCGCCCGAAGGAGCCTGCTTTGGTACTATGGAACTTTTC
TTAGGGGACACGTCCTCCTTTCACAGCTTCTAAGGTGTCCAGTGCATTGGGATGGTTTTC
CAGGCAAGGCACTCGGCCAATCCGCATCTCAGCCCTCTCAGGGAGCAGTCTTCCATCATG
CTGAATTTTGTCTTCCAGGAGCTGCCCCTATGGGGCGGGGCCGCAGGGCCAGCCTTGTTT
CTCTAACAAACAAACAAACAAACAGCCTTGTTTCTCTAGTCACATCATGTGTATACAAGG
AAGCCAGGAATACAGGTTTTCTTGATGATTTGGGTTTTAATTTTGTTTTTATTGCACCTG
ACAAAATACAGTTATCTGATGGTCCCTCAATTATGTTATTTTAATAAAATAAATTAAATT
TAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

Restriction Sites: ECoRI-NOT

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 TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

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_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.