

## **Product datasheet for RC402666**

## RAF1 (NM 002880) Human Mutant ORF Clone

**Product data:** 

**Product Type:** Mutant ORF Clones

Product Name: RAF1 (NM\_002880) Human Mutant ORF Clone

Mutation Description: P261A

Affected Codon#: 261

Affected NT#: 781

Nucleotide Mutation: RAF1 Mutant (P261A), Myc-DDK-tagged ORF clone of Homo sapiens v-raf-1 murine leukemia

viral oncogene homolog 1 (RAF1) as transfection-ready

**Effect:** Noonan syndrome

Symbol: RAF1

**Synonyms:** c-Raf; CMD1NN; CRAF; NS5; Raf-1

E. coli Selection: Kanamycin (25 ug/mL)

Mammalian Cell Neomycin

Selection:

**Vector:** pCMV6-Entry (PS100001)

Tag: Myc-DDK
ACCN: NM 002880

ORF Size: 1944 bp
Restriction Sites: Sgfl-Mlul

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**OriGene Technologies, Inc.** 9620 Medical Center Drive, Ste 200

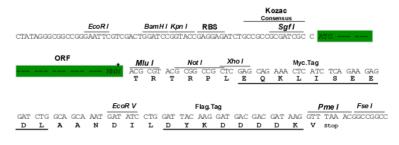
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## **Cloning Scheme:**





<sup>\*</sup> The last codon before the Stop codon of the ORF

**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).

**RefSeq:** NP 002871

RefSeq Size: 1944 bp
RefSeq ORF: 1947 bp
Locus ID: 5894
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, Nonsmall 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

MW: 71.3 kDa

This gene is the cellular homolog of viral raf gene (v-raf). The encoded protein is a MAP kinase **Gene Summary:** 

> 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]