

## Product datasheet for **MR209737**

### Raf1 (NM\_029780) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Raf1 (NM_029780) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Raf1
Synonyms:	6430402F14Rik; AA990557; BB129353; c-Raf; Craf1; D830050J10Rik; Raf-1; v-Raf
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide  
Sequence:

>MR209737 representing NM\_029780  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGCC**

ATGGAGCACATACAGGGAGCTTGAAGACGATCAGCAATGGCTTTGGACTCAAAGATGCGGTGTTTGATG  
GCTCCAGCTGCATCTCCCTACCATTGTTAGCAGTTTGGCTATCAGCGCCGGCCCTCAGATGATGGCAA  
GCTCACGGATTCTTCTAAGACAAGCAATACTATCCGGTTTTCTTGCCGAATAAGCAAAGGACTGTGGTC  
AATGTGCGGAATGGAATGAGCTTACATGACTGCCTTATGAAAGCTCTGAAGGTGAGAGGCCCTGCAGCCAG  
AGTGCTGTGCAGTGTTCAGACTTCTCCAGGAACACAAAGGTAAGAAAGCACGCTTAGATTGGAACCCGA  
TGCCGCCCTCTCTGATTGGAGAAGAACTGCAAGTGGATTTTTGGATCATGTTCCACTCACAACCTACAAC  
TTTGCTCGAAAACGTTCTGAAGCTTGCATTCTGTGACATCTGTGAGAAGTTCTGCTAAATGGATTTCT  
GATGTCAGACTTGTGGCTACAAGTTTCATGAGCACTGTAGCACAAAGTACCTACTATGTGTGTGGACTG  
GAGTAATATCAGACAGCTTGTGCTTTCCAAATTCCTGTTGGTGACAGTGGAGTCCCAGCACCACT  
TCTTTCCCAATGCGTCCGATGCGAGAATCTGTTCCCGGATGCCTGCTAGTTCACAGCACAGATACTCTA  
CACCCCATGCCTTCACTTCAACACCTCCAGCCCTTCTCAGAAGGTTCCCTGTCCAGAGGCAGAGGTC  
AACGTCCACTCCCAATGTCCACATGGTCAGCACCACCCTGCATGTGGACAGCAGGATGATTGAGGATGCA  
ATTCGAAGTCACAGTGAATCAGCCTCACCTTCCAGCCCTGTCCAGCAGCCAAACAACCTGAGTCCAAACAG  
GCTGGTACAGCCAAAACCCCTGTGCCAGCACAAAGAGAGCGGGCACCAGGATCTGGGACCCAGGAAAA  
AAACAAAATTAGGCCTCGTGGGCAGAGAGACTCGAGTTATTACTGGGAAATAGAAGCCAGTGAAGTGTG  
CTGTCTACTCGGATCGGGTCAGGTTCTTTGGCACTGTGTACAAGGGCAAGTGGCATGGAGATGTTGCAG  
TAAAGATCCTAAAGGTGGTTGACCCAACCTCCAGAGCAACTTCAGGCCTTCAGGAACGAGGTGGCTGTTTT  
GCGCAAAACACGGCATGTTAACATCCTGTGTTTCATGGGGTACATGACAAAGGACAACCTGGCGATTGTG  
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AGACATGAAATCCAACAATATATTTCTCCATGAAGGCCTCACGGTAAAAATTGGAGATTTTGGTTTGGCA  
ACAGTGAAGTCACGCTGGAGTGGTTCTCAGCAGGTTGAACAGCCCACTGGCTCTGTGCTGTGGATGGCCC  
CAGAAGTAATCCGGATGCAGGATGACAACCCGTTAGCTTCCAGTCCGACGTGTACTCGTACGGCATCGT  
GCTGTACGAGCTGATGGCTGGGAGCTTCCCTACGCCACATCAACAACCGAGACCAGATCATCTTCATG  
GTAGGCCGTGGGTATGCATCCCCTGATCTCAGCAGGCTCTACAAGAAGTCCCAAGGCAATGAAGAGGT  
TGGTGGCTGACTGTGTGAAGAAAGTCAAAGAAGAGAGACCTTTGTTTCCCAGATCCTGTCTCCATCGA  
GCTGCTTCAGCACTCTCTGCCGAAAATCAACAGGAGCGCCTCTGAGCCTTCCCTGCATCGGGCAGCTCAC  
ACTGAGGACATCAATGCTTGACGCTGACTACATCCCAAGGCTACCAGTCTTC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >MR209737 representing NM\_029780  
Red=Cloning site Green=Tags(s)

```
MEHIQGAWKTISNGFGLKDAVFDGSSCISPTIVQQFGYQRRASDDGKLTSSKTSNTIRVFLPNKQRTVV
NVRNGMSLHDCLMKALKVRGLQPECCAVFRLQEHKGGKARLDWNTDAASLIGEELQVDFLDHVPLTTHN
FARKTFLKLAFCDICQKFLLLNGFRCQTCGYKFHEHCSTKVPTMCVDWSNIRQLLLFPNSTVGDGSGVPAPP
SFPMMRRRESVSRMPASSQHRYSTPHAFTFNTSSPSSEGLSQRQRSTSTPNVHMVSTTLHVDSRMIEDA
IRSHSESASPSALSSSPNNLSPTGWSQPKTPVPAQRERAPGSGTQEKNI RPRGQRDSSYYWEIEASEVM
LSTRIGSGSGFTVYKWKWHGDVAVKILKVVDPTEQLQAFRNEVAVLRKTRHVNILLFMGYMTKDNLAIV
TQWCEGSSLYKHLHVQETKFQMFQLIDIARQTAQGM DYLHAKNIIHRDMKSNNIFLHEGLTVKIGDFGLA
TVKSRWSGSQQVEQPTGSLVWMAPEVIRMQDDNPF SFQSDVYSYGI VLYELMAGELPYAHINNRDQIIFM
VGRGYASPDLSRLYKNC PKAMKRLVADCVKKVKEERPLFPQILSSI ELLQHSLPKINRSASEPSLHRAAH
TEDINACTLTTSPRLPVF
```

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_029780

**ORF Size:** 1944 bp

**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).

**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\\_029780.4](#)

**RefSeq Size:** 3067 bp

**RefSeq ORF:** 1947 bp

**Locus ID:** 110157

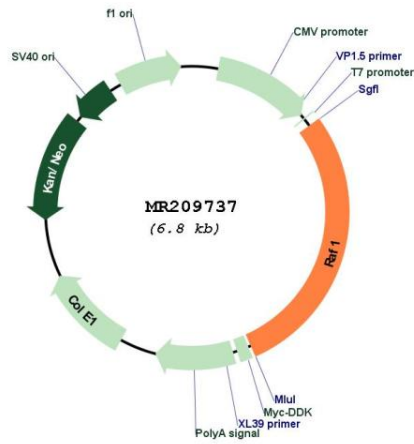
**UniProt ID:** [Q99N57](#)

**Cytogenetics:** 6 53.62 cM

**MW:** 73.4 kDa

**Gene Summary:** Serine/threonine-protein kinase that acts as a regulatory link between the membrane-associated Ras GTPases and the MAPK/ERK cascade, and this critical regulatory link functions as a switch determining cell fate decisions including proliferation, differentiation, apoptosis, survival and oncogenic transformation. RAF1 activation initiates a mitogen-activated protein kinase (MAPK) cascade that comprises a sequential phosphorylation of the dual-specific MAPK kinases (MAP2K1/MEK1 and MAP2K2/MEK2) and the extracellular signal-regulated kinases (MAPK3/ERK1 and MAPK1/ERK2). The phosphorylated form of RAF1 (on residues Ser-338 and Ser-339, by PAK1) phosphorylates BAD/Bcl2-antagonist of cell death at 'Ser-75'. Phosphorylates adenylyl cyclases: ADCY2, ADCY5 and ADCY6, resulting in their activation. Phosphorylates PPP1R12A resulting in inhibition of the phosphatase activity. Phosphorylates TNNT2/cardiac muscle troponin T. Can promote NF-kB activation and inhibit signal transducers involved in motility (ROCK2), apoptosis (MAP3K5/ASK1 and STK3/MST2), proliferation and angiogenesis (RB1). Can protect cells from apoptosis also by translocating to the mitochondria where it binds BCL2 and displaces BAD/Bcl2-antagonist of cell death. Plays a role in the oncogenic transformation of epithelial cells via repression of the TJ protein, occludin (OCLN) by inducing the up-regulation of a transcriptional repressor SNAI2/SLUG, which induces down-regulation of OCLN. Restricts caspase activation in response to selected stimuli, notably Fas stimulation, pathogen-mediated macrophage apoptosis, and erythroid differentiation (By similarity). Regulates Rho signaling and migration, and is required for normal wound healing.[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR209737