

Product datasheet for **SC126575**

B Raf (BRAF) (NM_004333) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	B Raf (BRAF) (NM_004333) Human Untagged Clone
Tag:	Tag Free
Symbol:	B Raf
Synonyms:	B-raf; B-RAF1; BRAF1; NS7; RAFB1
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

Fully Sequenced ORF: >OriGene ORF within SC126575 sequence for NM_004333 edited (data generated by NextGen Sequencing)

```

ATGGCGGCGCTGAGCGGTGGCGGTGGTGGCGGCGCGGAGCCGGGCCAGGCTCTGTTCAAC
GGGGACATGGAGCCCAGGCCGGCGCCGGCGCCGGCGCCGCTCTTCGGCTGCGGAC
CCTGCCATTCCGGAGGAGGTGTGGAATATCAAACAATGATTAAGTTGACACAGGAACAT
ATAGAGGCCCTATTGGACAAATTTGGTGGGGAGCATAATCCACCATCAATATATCTGGAG
GCCTATGAAGAATACACCAGCAAGCTAGATGCACTCCAACAAGAGAACAACAGTTATTG
GAATCTCTGGGGAACGGAAGTATTTTTCTGTTTCTAGCTCTGCATCAATGGATACCGTT
ACATCTTCTTCTTCTAGCCTTTAGTGTACCTTCATCTCTTTCAGTTTTTCAAAT
CCCACAGATGTGGCACGGAGCAACCCCAAGTACCACAAAAACCTATCGTTAGAGTCTTC
CTGCCCAACAACAGAGGACAGTGGTACCTGCAAGGTGTGGAGTTACAGTCCGAGACAGT
CTAAAGAAAGCACTGATGATGAGAGGTCTAATCCAGAGTGTGTGTGTTTACAGAATT
CAGGATGGAGAGAAGAAACCAATTGGTTGGGACTGATATTTCTGGCTTACTGGAGAA
GAATTGCATGTGGAAGTGTGGAGAATGTTCCACTTACAACACACAACCTTTGTACGAAA
ACGTTTTTACCTTAGCATTTTGTGACTTTTGTGAAAGCTGCTTTTCCAGGGTTTCCGC
TGTCAAACATGTGGTTATAAATTTCAACCAGCGTTGTAGTACAGAAGTTCCACTGATGTG
GTTAATTATGACCAACTTGATTTGCTGTTTGTCTCCAAGTTCTTTGAACACCACCAATA
CCACAGGAAGAGGCGTCTTAGCAGAGACTGCCCTAACATCTGGATCATCCCCTTCCGCA
CCCGCCTCGGACTCTATTGGGCCCAAATTTCTACCAGTCCGCTCTCTTCAAATCCATT
CCAATTCACAGCCCTTCCGACCAGCAGATGAAGATCATCGAAATCAATTTGGCAACGA
GACCGATCCTCATCAGCTCCCAATGTGCATATAAACACAATAGAACCCTGTCAATATTGAT
GACTTTGATTAGAGACCAAGGATTTGCTGGTGTGGAGGATCAACCACAGGTTTGTCTGCT
ACCCCCCTGCCTATTACCTGGCTCACTAACTAACGTGAAAGCCTTACAGAAAATCTCA
GGACCTCAGCGAGAAAGGAAGTCACTTTATCCTCAGAAGACAGGAATCGAATGAAAACA
CTTGGTAGACGGACTCGAGTGTGATTGGGAGATTCTGATGGGAGATTACAGTGGGA
CAAAGAATTGGATCTGGATCATTGGAACAGTCTACAAGGAAAGTGGCATGGTGTG
GCAGTGAATAATTGAATGTGACAGCACCTACACCTCAGCAGTTACAAGCCTTCAAAAAAT
GAAGTAGGAGTACTCAGGAAAACACGACATGTGAATATCCTACTTTCATGGGCTATTCC
ACAAAGCCACAACCTGGCTATTGTTACCCAGTGGTGTGAGGGCTCCAGCTTGTATCACCAT
CTCCATATCATTGAGACCAAAATTTGAGATGATCAAACCTATAGATATTGCACGACAGACT
GCACAGGGCATGGATTACTTACACGCCAAGTCAATCATCCACAGAGACCTCAAGAGTAAT
AATATATTTCTTATGAAGACCTCACAGTAAAAATAGGTGATTTTGGTCTAGCTACAGTG
AAATCTCGATGGAGTGGTCCCATCAGTTTGAACAGTTGTCTGGATCCATTTTGTGGATG
GCACCAGAAGTCAACAGAAATGCAAGATAAAAAATCCATACAGCTTTCAGTCAGATGTATAT
GCATTTGGAAATGTTCTGTATGAATTGATGACTGGACAGTTACCTTATTCAAACATCAAC
AACAGGGACCAGATAATTTTTATGGTGGGACGAGGATACCTGTCTCCAGATCTCAGTAAG
GTACGGAGTAACGTGCAAAAAGCCATGAAGAGATTAATGGCAGAGTGCCTCAAAAAGAAA
AGAGATGAGAGACCACTTTTCCCAAATTTCTCGCCTCTATTGAGCTGCTGGCCCGCTCA
TTGCCAAAAATTCACCGCAGTGCATCAGAACCCTCCTTGAATCGGGCTGGTTTCCAAACA
GAGGATTTTAGTCTATATGCTTGTGCTTCTCAAAAACACCCATCCAGGCAGGGGATAT
GGTGCCTTCTGTCCACTGA
    
```

Clone variation with respect to NM_004333.4

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_004333 unedited
 TTGTAATACGACTCACTATAGGGCGGCCGCAATTCGGCACAGAGGGGCCGGTACCTGAG
 GTGGCCAGGGCCCTCCGCCGCGGCCGCCCGGGCCGCTCCTCCCGCGCCCCCGC
 GCCCCCGCTCCTCCGCCTCCGCCTCCGCCTCCGCCTCCCCAGCTCTCCGCCTCCCTTC
 CCCCTCCCGCCCGACAGCGGCCGCTCGGGCCCCGGCTCTCGTTATAAGATGGCGGCGC
 TGAGCGGTGGCGGTGGTGGCGGCGGGAGCCGGGCCAGGCTCTGTTCAACGGGGACATGG
 AGCCCGAGGCCGCGGCCGCCGCCGCCGCCGCCGCCGCCGCCGCCGCCGCCGCCGCCGCC
 CGGAGGAGGTGTGGAATATCAAACAAATGATTAAGTTGACACAGGAACATATAGAGGCC
 TATTGGACAAATTTGGTGGGAGCATAATCCACCATCAATATATCTGGAGCCTATGAAG
 AATACACCAGCAAGCTAGATGCACTCCAACAAAGAGAACAACAGTTATTGGAATCTCTGG
 GGAACGGAAGTATTTTTCTGTTTCTAGCTCTGCATCAATGGATACCGTTACATCTTCTT
 CCTCTTAGCCTTTAGTGCTACCTTCATCNTCTTCAGTTTTTCAAATCCCACAGATG
 TGGCACGGAGCACCCCCAGTCACCACAAAACCTATCGTTAGAGTCTTCTGCCACAA
 ACAGAGGACAGTGGTACCTGCCAGGTGTGGAGTTACAGTCCGAGACAGTCTAAAGAAAGC
 CTGATGATGAGAAGTCTAATCCAGAGTGTGTGCTGTTACAGAATCCAGATGAGGAGAGA
 ACCAATGTTGGGACACTGAATTCCTGGCTACTGGAAAAATGCCGGGAAGGGTGGAGA
 TGCCCTTACCC

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_004333 unedited
 GTAACGCGCCCGCAATCTAGTAGTCGAGTTTTTTTTTTTTTTTTTTTTTAAACATATAAGCA
 AACATATGTTCAATTTATTTTCTTTTCGTTGCTACTCTCCTGAACCTCTCTACTCATTGT
 TTCAGTGGACAGGAAACGCACCATATCCCCTGCCTGGATGGGTGTTTTTGGAGAAGCAC
 AAGCATATAGACTAAAATCCTCTGTTTGGAAACAGCCGATTCAAGGAGGGTCTGATG
 CACTGCGGTGAATTTTTGGCAATGAGCGGGCCAGCAGCTCAATAGAGGCGAGAATTTGGG
 GAAAGAGTGGTCTCTCATCTCTTTTCTTTTGGAGCACTGCCATTAATCTCTTCATGG
 CTTTTGGACAGTTACTCCGTACCTTACTGAGATCTGGAGACAGGTATCCTCGTCCCACCA
 TAAAAATTATCTGGTCCCTGTTGTTGATGTTTGAATAAGGTAAGTGTCCAGTCATCAATT
 CATAACAGAAATCCAAATGCATATACATGCTGACTGAAAGCTGATGGATTTTTATCT
 TGCATTTCTGATGACTTCTGGTGCCATTCACAAAATGGATCCAGACAACTGTTCAAAGTGA
 TGGGACCCACTCCATCGAGATTTCACTGTAGCTAGACAAAATCACCTATTTTTACTGGG
 AGGTCTTCATGAAGAATATATTACTCTTGAGGTCTCTTGAGGATGATTGACTTGGCG
 TGTAGTAATCCATGCCCTGGCAGTCTGCCCGCCATAATCATAAAGTTGATCTCTCAA
 TTTGGCCAAAGATTTGGAGATGGTGATAACAAGCCGGAGCCCTCCACCACTGGGTACAAT
 AGCCAGTTGTGGCTTTGTGGATAACCCCATGAAATAGGATTTTCACTGGGGGGTTTACC
 TAAACCCCTATTCCTTTTTGAAGCTCGAACTGCCAAGGGTAGGGCCGTCATTAACCTTTT
 ACCGGCCATACCATTCATTTCCCTTGTAACAGTACACAAACCAACCATCTTGGC

Restriction Sites:

NotI-NotI

ACCN:

NM_004333

Insert Size:

2400 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

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_004333.2](#), [NP_004324.2](#)

RefSeq Size: 2513 bp

RefSeq ORF: 2301 bp

Locus ID: 673

UniProt ID: [P15056](#)

Cytogenetics: 7q34

Domains: pkinase, TyrKc, DAG_PE-bind, S_TKc, RBD

Protein Families: Druggable Genome, Protein Kinase

Protein Pathways: Acute myeloid leukemia, Bladder cancer, Chemokine signaling pathway, Chronic myeloid leukemia, Colorectal cancer, Endometrial cancer, ErbB signaling pathway, Focal adhesion, Glioma, Insulin signaling pathway, Long-term depression, Long-term potentiation, MAPK signaling pathway, Melanoma, mTOR signaling pathway, 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, Thyroid cancer, Vascular smooth muscle contraction

Gene Summary:

This gene encodes a protein belonging to the RAF family of serine/threonine protein kinases. This protein plays a role in regulating the MAP kinase/ERK signaling pathway, which affects cell division, differentiation, and secretion. Mutations in this gene, most commonly the V600E mutation, are the most frequently identified cancer-causing mutations in melanoma, and have been identified in various other cancers as well, including non-Hodgkin lymphoma, colorectal cancer, thyroid carcinoma, non-small cell lung carcinoma, hairy cell leukemia and adenocarcinoma of lung. Mutations in this gene are also associated with cardiofaciocutaneous, Noonan, and Costello syndromes, which exhibit overlapping phenotypes. A pseudogene of this gene has been identified on the X chromosome. [provided by RefSeq, Aug 2017]