

# Recombinant Human BRAF

**Cat. No.** BRAF-26567TH    **Lot. No.** (See product label)

## SPECIFICATION

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| <b>Product Overview</b>    | Recombinant fragment, corresponding to amino acids 432-725 of Human B Raf coexpressed with P50.MW is 36 kDa.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Species</b>             | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>ProteinLength</b>       | 432-725 a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Description</b>         | This gene encodes a protein belonging to the raf/mil family of serine/threonine protein kinases. This protein plays a role in regulating the MAP kinase/ERKs signaling pathway, which affects cell division, differentiation, and secretion. Mutations in this gene are associated with cardiofaciocutaneous syndrome, a disease characterized by heart defects, mental retardation and a distinctive facial appearance. Mutations in this gene have also been associated with various cancers, including non-Hodgkin lymphoma, colorectal cancer, malignant melanoma, thyroid carcinoma, non-small cell lung carcinoma, and adenocarcinoma of lung. A pseudogene, which is located on chromosome X, has been identified for this gene. |
| <b>Tissue specificity</b>  | Brain and testis.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Biological activity</b> | Activity was tested using MEK1 as substrate. Assay buffer: 50 mMHEPES, pH 7.4, 3 mM MgCl <sub>2</sub> , 3 mM MnCl <sub>2</sub> , 1 mM DTT, 3 uM Na-orthovanadate, 0.1mM ATP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Form</b>                | Liquid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Storage buffer</b>      | Preservative: NoneConstituents: 40% Glycerol, 0.05% Tween 20, 3mM DTT, 25mM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

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|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                 | Tris HCl, 150mM Sodium chloride, pH 8.0                                                                                                                                                                                                                                                                                                           |
| <b>Storage</b>                  | Aliquot and store at -80°C. Avoid repeated freeze / thaw cycles.                                                                                                                                                                                                                                                                                  |
| <b>Sequences of amino acids</b> | SEDRNRMKT LGRRDSSDDW EIPDGQITVG QRIGSGSFGT VYKGKWHGDV<br>AVKMLNVTAP TPQQLQAFKN EVGVLKTRH VNILLFMGYS TKPQLAIVTQ<br>WCEGSSLYHH LHIIETKFEM IKLIDIARQT AQGMDYLHAK SIIHRDLKSN<br>NIFLHEDLTV KIGDFGLATV KSRWSGSHQF EQLSGSILWM APEVIRMQDK<br>NPYSFQSDVY AFGIVLYELM TGQLPYSNIN NRDQIIFMVG RGYLSPDLSK<br>VRSNCPKAMK RLMAECLKKK RDERPLFPQI LASIELLARS LPKIH |
| <b>Sequence Similarities</b>    | Belongs to the protein kinase superfamily. TKL Ser/Thr protein kinase family. RAF subfamily. Contains 1 phorbol-ester/DAG-type zinc finger. Contains 1 protein kinase domain. Contains 1 RBD (Ras-binding) domain.                                                                                                                                |

## GENE INFORMATION

|                        |                                                                                                     |
|------------------------|-----------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | BRAF v-raf murine sarcoma viral oncogene homolog B1 [ Homo sapiens ]                                |
| <b>Official Symbol</b> | BRAF                                                                                                |
| <b>Synonyms</b>        | BRAF; v-raf murine sarcoma viral oncogene homolog B1; serine/threonine-protein kinase B-raf; BRAF1; |
| <b>Gene ID</b>         | 673                                                                                                 |
| <b>mRNA Refseq</b>     | NM_004333                                                                                           |
| <b>Protein Refseq</b>  | NP_004324                                                                                           |
| <b>MIM</b>             | 164757                                                                                              |

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| <b>Uniprot ID</b>          | P15056                                                                                                                                                                                                                                                                                                                            |
| <b>Chromosome Location</b> | 7q34                                                                                                                                                                                                                                                                                                                              |
| <b>Pathway</b>             | ARMS-mediated activation, organism-specific biosystem; Activation of NMDA receptor upon glutamate binding and postsynaptic events, organism-specific biosystem; Acute myeloid leukemia, organism-specific biosystem; Acute myeloid leukemia, conserved biosystem; B Cell Receptor Signaling Pathway, organism-specific biosystem; |
| <b>Function</b>            | ATP binding; MAP kinase kinase kinase activity; metal ion binding; mitogen-activated protein kinase kinase binding; nucleotide binding;                                                                                                                                                                                           |

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