BRAF Antibody – Mouse Monoclonal

PRODUCT OVERVIEW

Product Name	BRAF, Monoclonal Antibody
Full Product Name	BRAF (v-raf murine Sarcoma Viral Oncogene Homolog B1, B-RAF1, BRAF1, FLJ95109, MGC126806, MGC138284, RAFB1) (MaxLight 490)
Product Gene Name	anti-BRAF antibody
Product Synonym Names	v-raf murine Sarcoma Viral Oncogene Homolog B1; B-RAF1; BRAF1; FLJ95109; MGC126806; MGC138284; RAFB1
Clonality	Monoclonal
Isotype	IgG2a,k
Clone Number	2F7
Host	Mouse
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight490.
Purity/Purification	Purified
Specificity	Recognizes BRAF.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: MaxLight490 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	40.6 kDa (360aa)
OMIM	114500
3D Structure	ModBase 3D Structure for P15056
Immunogen	BRAF (NP_004324, 138aa-231aa) full length recombinant protein with GST tag. MW of the GST tag alone is 26kD.
Immunogen Sequence	FQNPTDVARSNPKSPQKPIVRVFLPNKQRTVVPARCGVTVRDSLKKALMMRGLIPECCAVYRIQDGEKKPIGWDTDISWLTGEELHVEVLENVP
Conjugate	MaxLight490
Product Categories/Family for anti-BRAF antibody	Antibodies; Protein Kinases
Applications Tested/Suitable for anti-BRAF antibody	Immunofluorescence (IF), Western Blot (WB)
Application Notes for anti-BRAF antibody	Applications are based on unconjugated antibody.

Related Product Information for anti-BRAF antibody	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. [provided by RefSeq]
Other Notes	Small volumes of anti-BRAF antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for BRAF purchase	MBS6205373 is an antibody targeting BRAF. Also known as BRAF (v-raf murine Sarcoma Viral Oncogene Homolog B1, B-RAF1, BRAF1, FLJ95109, MGC126806, MGC138284, RAFB1) (MaxLight 490). Host: Mouse.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for BRAF. It may not necessarily be applicable to this product.

NCBI GI #	33188459
NCBI GeneID	673
NCBI Accession #	NP_004324
UniProt Primary Accession #	P15056
UniProt Secondary Accession #	Q13878; Q3MIN6; Q9UDP8; Q9Y6T3; A4D1T4; B6HY61; B6HY62; B6HY63; B6HY64; B6HY65; B6HY66
UniProt Related Accession #	P15056
GenBank Nucleotide #	NP_004324.2
NCBI Official Full Name	serine/threonine-protein kinase B-raf isoform 1
NCBI Official Synonym Full Names	B-Raf proto-oncogene, serine/threonine kinase
NCBI Official Symbol	BRAF
NCBI Official Synonym Symbols	NS7; B-raf; BRAF1; RAFB1; B-RAF1
UniProt Protein Name	Serine/threonine-protein kinase B-raf
UniProt Synonym Protein Names	Proto-oncogene B-Raf; p94; v-Raf murine sarcoma viral oncogene homolog B1
Protein Family	High-affinity branched-chain amino acid transport ATP-binding protein
UniProt Gene Name	BRAF
UniProt Synonym Gene Names	BRAF1; RAFB1
UniProt Entry Name	BRAF_HUMAN
NCBI Protein Information	serine/threonine-protein kinase B-raf
NCBI Summary for BRAF	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]

UniProt Comments for BRAF	BRAF: a tyrosine kinase-like kinase of the RAF family. Involved in the transduction of mitogenic signals from the cell membrane to the nucleus. May play a role in the postsynaptic responses of hippocampal neuron. Frequently mutated in thyroid cancers, skin melanomas and at lower frequency in a wide range of human cancers. An activating mutation, mimicking phosphorylation of the activation loop, is seen in 60% of malignant melanoma samples. Raf mutations are generally exclusive to Ras activating mutations. Activating mutations are also seen in ~10% of colorectal cancers, in lung cancers and gliomas, and at a lower rate in several other tumors. Inactivating mutations are also seen and may result in activation of c-Raf and Erk. Mutations in B-Raf, MEK1 and MEK2 also associated with cardiofaciocutaneous syndrome, displaying morphological, cardiac and mental defects. Approved Inhibitor: Nexavar/Sorafenib. Protein type: Protein kinase, TKL; Kinase, protein; Oncoprotein; Protein kinase, Ser/Thr (non-receptor); EC 2.7.11.1; TKL group; RAF family Chromosomal Location of Human Ortholog: 7q34 Cellular Component: neuron projection; mitochondrion; plasma membrane; cytosol; nucleus Molecular Function: small GTPase binding; identical protein binding; protein serine/threonine kinase activity; protein binding; MAP kinase kinase kinase activity; mitogen-activated protein kinase kinase binding; protein heterodimerization activity; calcium ion binding; ATP binding; protein kinase activity Biological Process: response to peptide hormone stimulus; positive T cell selection; response to cAMP; fibroblast growth factor receptor signaling pathway; CD4-positive, alpha beta T cell differentiation; nerve growth factor receptor signaling pathway; activation of MAPKK activity; protein heterooligomerization; somatic stem cell maintenance; MAPKKK cascade; protein amino acid phosphorylation; positive regulation of peptidyl-serine phosphorylation; regulation of cell proliferation; synaptic transmission; organ morphogenesis; myeloid progenitor cell differentiation; small GTPase mediated signal transduction; positive regulation of stress fiber formation; visual learning; negative regulation of neuron apoptosis; negative regulation of apoptosis Disease: Noonan Syndrome 1; Noonan Syndrome 7; Lung Cancer; Leopard Syndrome 3; Cardiofaciocutaneous Syndrome 1
Research Articles on BRAF	**1.** One way to potentially improve adoptive T cell therapy is to combine it with the administration of small molecule inhibitors. Vemurafenib specifically inhibits mutated BRAFV600E/K molecules and directs cell death of BRAFV600E/K expressing tumors
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