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Rabbit Anti-phospho-B-Raf (Thr597)/AP Conjugated antibody

SL5233R-AP

Product Name	Anti-phospho-B-Raf (Thr597)/AP
Chinese Name	碱性磷酸酶（AP）标记的磷酸化 B-Raf 抗体
Alias	B Raf (phospho T597); p-B Raf (phospho T597); 94 kDa B raf protein; B raf 1; B Raf proto oncogene serine threonine protein kinase; BRAF 1; Braf; BRAF1; cRmil; MGC126806; MGC138284; Murine sarcoma viral (v-raf) oncogene homolog B1; Murine sarcoma viral v raf oncogene homolog B1; p94; RAFB 1; RAFB1; v raf murine sarcoma viral oncogene homolog B1; FLJ95109; BRAF_HUMAN.
Product Type	Phosphorylated anti
Research Area	Tumour immunology Signal transduction Apoptosis transcriptional regulatory factor Kinases and Phosphatases
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human Mouse Rat(predicted:Chicken Dog Pig Cow Horse)
Applications	IHC-P=1:100-500, IHC-F=1:100-500 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight	94kDa
Form	Lyophilized or Liquid
Concentration	1mg/ml
immunogen	KLH conjugated Synthesised phosphopeptide derived from mouse B-Raf around the phosphorylation site of Thr597
Lsotype	IgG
Purification	affinity purified by Protein A
Storage Buffer	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks

at 2-4 °C.

background:
The Raf kinases are important intermediates in signal transduction. Raf protein family members, including A Raf and B Raf, have intrinsic serine/threonine kinase activity. Interaction between Ras proteins and Raf proteins results in Raf-mediated phosphorylation and activation of MEK (also known as MAP kinase kinase). Defects in BRAF are involved in a wide range of cancers. B-Raf is a serine/threonine protein kinase that acts as a signal transducer from membrane-associated receptors to nuclear transcription factors. 1 BRAF is important for the regulation of cell proliferation and determination of cell fate during embryogenesis. BRAF acts downstream of Ras and upstream of MEK in the Ras-Raf-MEK-ERK signal transduction pathway, which is a conserved RAS-activated protein kinase cascade that regulates cell growth, proliferation, and differentiation in response to growth factors, cytokines, and hormones.

Function:
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.

Product Detail

Subunit:
Monomer. Homodimer. Heterodimerizes with RAF1, and the heterodimer possesses a highly increased kinase activity compared to the respective homodimers or monomers. Heterodimerization is mitogen-regulated and enhanced by 14-3-3 proteins. MAPK1/ERK2 activation can induce a negative feedback that promotes the dissociation of the heterodimer by phosphorylating BRAF at Thr-753. Found in a complex with at least BRAF, HRAS1, MAP2K1, MAPK3 and RGS14. Interacts with RIT1. Interacts (via N-terminus) with RGS14 (via RBD domains); the interaction mediates the formation of a ternary complex with RAF1, a ternary complex inhibited by GNAI1 (By similarity). Interacts with DGKH.

Subcellular Location:
Nucleus. Cytoplasm. Cell membrane.

Tissue Specificity:
Brain and testis.

Post-translational modifications:
Phosphorylation at Ser-365 by SGK1 inhibits its activity.
Methylation at Arg-671 decreases stability and kinase activity.
Ubiquitinated by RNF149; which leads to proteasomal degradation.

DISEASE:
Note=Defects in BRAF are found in a wide range of cancers.
Defects in BRAF may be a cause of colorectal cancer (CRC) [MIM:114500].
Defects in BRAF are involved in lung cancer (LNCR) [MIM:211980]. LNCR is a common malignancy affecting tissues of the lung. The most common form of lung cancer is non-small cell lung cancer (NSCLC) that can be divided into 3 major histologic subtypes: squamous cell carcinoma, adenocarcinoma, and large cell lung cancer. NSCLC is often diagnosed at an advanced stage and has a poor prognosis.
Defects in BRAF are involved in non-Hodgkin lymphoma (NHL) [MIM:605027]. NHL is a cancer that starts in cells of the lymph system, which is part of the body's immune system. NHLs can occur at any age and are often marked by enlarged lymph nodes, fever and weight loss.
Defects in BRAF are a cause of cardiofaciocutaneous syndrome (CFC syndrome) [MIM:115150]; also known as cardio-facio-cutaneous syndrome. CFC syndrome is characterized by a distinctive facial appearance, heart defects and mental retardation. Heart defects include pulmonic stenosis, atrial septal defects and hypertrophic cardiomyopathy. Some affected individuals present with ectodermal abnormalities such as sparse, friable hair, hyperkeratotic skin lesions and a generalized ichthyosis-like condition. Typical facial features are similar to Noonan syndrome. They include high forehead with bitemporal constriction, hypoplastic supraorbital ridges, downslanting palpebral fissures, a depressed nasal bridge, and posteriorly angulated ears with prominent helices. The inheritance of CFC syndrome is autosomal dominant.
Defects in BRAF are the cause of Noonan syndrome type 7 (NS7) [MIM:613706]. Noonan syndrome is a disorder characterized by facial dysmorphic features such as hypertelorism, a downward eyeslant and low-set posteriorly rotated ears. Other features can include short stature, a short neck with webbing or redundancy of skin, cardiac anomalies, deafness, motor delay and variable intellectual deficits.
Defects in BRAF are the cause of LEOPARD syndrome type 3 (LEOPARD3) [MIM:613707]. LEOPARD3 is a disorder characterized by lentigines, electrocardiographic conduction abnormalities, ocular hypertelorism, pulmonic stenosis, abnormalities of genitalia, retardation of growth, and sensorineural deafness.
Note=A chromosomal aberration involving BRAF is found in pilocytic astrocytomas. A tandem duplication of 2 Mb at 7q34 leads to the expression of a KIAA1549-BRAF fusion protein with a constitutive kinase activity and inducing cell transformation.

Similarity:
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.

Database links:

Entrez Gene: 673 Human

Entrez Gene: 109880 Mouse

Entrez Gene: 114486 Rat

Omim: 164757 Human

SwissProt: P15056 Human

SwissProt: P28028 Mouse

Unigene: 550061 Human

Unigene: 245513 Mouse

Important Note:
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

BRAF 蛋白是有丝分裂原活化的蛋白激酶/细胞外信号调节激酶途径蛋白。正常的 B-Raf 蛋白的功能是传递来自 The cell membrane 的信号,在 Ras-Raf-MEK-ERKSignal transduction 调节途径中有着重要的作用。BRAF 是一种在癌细胞的生长和存活中起到关键作用的蛋白质,并且在大多数恶性黑素瘤患者和少数结肠癌、乳腺癌和肺癌患者中发生突变，目前 BRAF 也用于恶性黑素瘤和 Tumour 的研究。