

Product name:	Raf-1 (phospho Ser301) Rabbit Polyclonal Antibody
Cat number:	ABN05336
Conjugate:	Unconjugated
Size:	100µL
Clone:	Polyclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	Synthesized phospho-peptide around the phosphorylation site of human Raf-1 (phospho Ser301)
Reactivity:	Human,Mouse,Rat
Applications:	WB 1:500-1:2000,IHC 1:50-1:300,ELISA 1:2000-1:20000
Molecular Weight:	75kDa
Purification:	Affinity purification
Form:	Liquid
Buffer:	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.

Background:

This gene is the cellular homolog of viral raf gene (v-raf). The encoded protein is a MAP kinase kinase kinase (MAP3K), which functions downstream of the Ras family of membrane associated GTPases to which it binds directly. Once activated, the cellular RAF1 protein can phosphorylate to activate the dual specificity protein kinases MEK1 and MEK2, which in turn phosphorylate to activate the serine/threonine specific protein kinases, ERK1 and ERK2. Activated ERKs are pleiotropic effectors of cell physiology and play an important role in the control of gene expression involved in the cell division cycle, apoptosis, cell differentiation and cell migration. Mutations in this gene are associated with Noonan syndrome 5 and LEOPARD syndrome 2. [provided by RefSeq, Jul 2008], catalytic activity: ATP + a protein = ADP + a phosphoprotein., cofactor: Binds 2 zinc ions per subunit., disease: Defects in RAF1 are the cause of LEOPARD syndrome type 2 (LEOPARD syndrome-2) [MIM:611554]. LEOPARD syndrome is an autosomal dominant disorder allelic with Noonan syndrome. The acronym LEOPARD stands for lentigines, electrocardiographic conduction abnormalities, ocular hypertelorism, pulmonic stenosis, abnormalities of genitalia, retardation of growth, and deafness., disease: Defects in RAF1 are the cause of Noonan syndrome type 5 (NS5) [MIM:611553]. Noonan syndrome (NS) is a disorder characterized by dysmorphic facial features, short stature, hypertelorism, cardiac anomalies, deafness, motor delay, and a bleeding diathesis. It is a genetically heterogeneous and relatively common syndrome, with an estimated incidence of 1 in 1000-2500 live births., function: Involved in the transduction of mitogenic signals from the cell membrane to the nucleus. Part of the Ras-dependent signaling pathway from receptors to the nucleus. Protects cells from apoptosis mediated by STK3., PTM: Phosphorylated upon DNA damage, probably by ATM or ATR. Phosphorylation at Thr-269 increases its kinase activity., similarity: Belongs to the protein kinase superfamily. TKL Ser/Thr protein kinase family. RAF subfamily., similarity: Contains 1 phorbol-ester/DAG-type zinc finger., similarity: Contains 1 protein kinase domain., similarity: Contains 1 RBD (Ras-binding) domain., subunit: Interacts with Ras proteins; the interaction is antagonized by RIN1. Weakly interacts with RIT1 (By similarity). Interacts with STK3; the interaction inhibits its pro-apoptotic activity. Interacts with YWHAZ (unphosphorylated at 'Thr-232')., tissue specificity: In skeletal muscle, isoform 1 is more abundant than isoform 2.,