ARG52410
anti-Raf1 phospho (Ser642) antibody

Package: 50 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes Raf1 phospho (Ser642)
Tested Reactivity	Rat
Predict Reactivity	Hu, Ms, Bov, Chk, Dog, NHuPrm
Tested Application	WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	Raf1
Species	Rat
Immunogen	Synthetic phospho-peptide corresponding to amino acid residues surrounding Ser642 conjugated to KLH
Conjugation	Un-conjugated
Alternate Names	c-Raf; cRaf; Proto-oncogene c-RAF; CRAF; RAF proto-oncogene serine/threonine-protein kinase; CMD1NN; Raf-1; EC 2.7.11.1; NS5

Application Instructions

Application table

Application	Dilution
WB	1:1000

Application Note: Specific for the ~74k Raf-1 protein phosphorylated at Ser642.
* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

Form	Liquid
Purification	Affinity Purified
Buffer	10 mM HEPES (pH 7.5), 150 mM NaCl, 0.1 mg/ml BSA and 50% Glycerol
Stabilizer	0.1 mg/ml BSA, 50% Glycerol
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Database links	GeneID: 24703 Rat Swiss-port # P11345 Rat
Gene Symbol	RAF1
Gene Full Name	v-raf-leukemia viral oncogene 1
Background	The Ras pathway is a critical signal transduction cascade involved in regulating cellular proliferation, differentiation, survival, and oncogenic transformation. Members of the Raf serine/threonine kinase family are key intermediates in this cascade, functioning to relay signals from activated Ras to the downstream protein kinases MEK and ERK (Marshall, 1996). Previous studies have shown that phosphorylation is required for Raf-1 activation (Dhillon and Kolch, 2002; Chong et al., 2003). Recent work has demonstrated that phosphorylation also regulates the downregulation of Raf (Dougherty et al., 2005) with two sites participating: Ser301 and Ser642.
Research Area	Cancer antibody; Cell Biology and Cellular Response antibody; Cell Death antibody; Metabolism antibody; Signaling Transduction antibody
Calculated Mw	73 kDa
PTM	Phosphorylation at Thr-269, Ser-338, Tyr-341, Thr-491 and Ser-494 results in its activation. Phosphorylation at Ser-29, Ser-43, Ser-289, Ser-296, Ser-301 and Ser-642 by MAPK1/ERK2 results in its inactivation. Phosphorylation at Ser-259 induces the interaction with YWHAZ and inactivates kinase activity. Dephosphorylation of Ser-259 by the complex containing protein phosphatase 1, SHOC2 and M-Ras/MRAS relieves inactivation, leading to stimulate RAF1 activity. Phosphorylation at Ser-338 by PAK1 and PAK5 and Ser-339 by PAK1 is required for its mitochondrial localization. Phosphorylation at Ser-621 in response to growth factor treatment stabilizes the protein, possibly by preventing proteasomal degradation. Phosphorylation at Ser-289, Ser-296, Ser-301, Ser-338 and Ser-621 are somehow linked to the methylation potential of cells. Treatment of cells with HGF in the presence of the methylation inhibitor 5'-methylthioadenosine (MTA) results in increased phosphorylation at Ser-338 and Ser-621 and decreased phosphorylation at Ser-296, Ser-301 and Ser-338. Dephosphorylation at Ser-338 by PPP5C results in a activity decrease. Methylated at Arg-563 in response to EGF treatment. This modification leads to destabilization of the protein, possibly through proteasomal degradation.