

p-Raf-1 (Ser 338): sc-12358

BACKGROUND

Raf-1 is a ubiquitously expressed cytoplasmic protein with intrinsic serine/threonine kinase activity. Raf-1, or c-Raf, is the cellular homolog of v-Raf, the product of the transforming gene of the 3611 strain of murine sarcoma virus. The unregulated kinase activity of the v-Raf protein is associated with cellular transformation and mitogenesis. Raf-1 is normally suppressed by its regulatory N-terminal domain. Raf-1 is activated in response to a variety of tyrosine kinase receptors as well as in response to pp60v-Src expression. Specifically, Raf-1 is phosphorylated in the catalytic domain at Ser 338 and, to a lesser extent, Ser 339. This phosphorylation requires the co-activation of PI 3-kinase and the Ras signaling pathway. Raf-1 is also phosphorylated on Tyr 340 and 341, which induces the phosphorylation of MEK. Phosphorylation of Ser 621 is essential for the catalytic activity of Raf-1 and downregulation by c-AMP-dependent protein kinase A (PKA). PKA also phosphorylates Raf-1 on Ser 43 and Ser 259. PKA phosphorylation of Ser 259 inhibits Raf-1 and decreases the phosphorylation necessary for Raf-1 activation at Ser 338.

CHROMOSOMAL LOCATION

Genetic locus: RAF1 (human) mapping to 3p25.2; Raf1 (mouse) mapping to 6 E3.

SOURCE

p-Raf-1 (Ser 338) is available as either goat (sc-12358) or rabbit (sc-12358-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing Ser-338 phosphorylated Raf-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-12358 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-Raf-1 (Ser 338) is recommended for detection of Ser 338 phosphorylated Raf-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

p-Raf-1 (Ser 338) is also recommended for detection of correspondingly phosphorylated Raf-1 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for Raf-1 siRNA (h): sc-29462, Raf-1 siRNA (m): sc-29463, Raf-1 shRNA Plasmid (h): sc-29462-SH, Raf-1 shRNA Plasmid (m): sc-29463-SH, Raf-1 shRNA (h) Lentiviral Particles: sc-29462-V and Raf-1 shRNA (m) Lentiviral Particles: sc-29463-V.

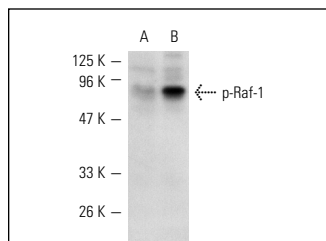
Molecular Weight of p-Raf-1: 74 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, NIH/3T3 whole cell lysate: sc-2210 or KNRK whole cell lysate: sc-2214.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



p-Raf-1 (Ser 338)-R: sc-12358-R. Western blot analysis of Raf-1 phosphorylation in untreated (A) and UV-irradiated (B) HeLa cultures.

SELECT PRODUCT CITATIONS

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- Chuang, L.Y., et al. 2006. Role of nitric oxide in high glucose-induced mitogenic response in renal fibroblasts. *Mol. Endocrinol.* 20: 2548-2558.
- De Las Heras, M., et al. 2006. *In-situ* demonstration of mitogen-activated protein kinase Erk 1/2 signalling pathway in contagious respiratory tumours of sheep and goats. *J. Comp. Pathol.* 135: 1-10.
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- Hayun, M., et al. 2007. Synergistic effect of AS101 and Bryostatins on myeloid leukemia cell differentiation *in vitro* and in an animal model. *Leukemia* 21: 1504-1513.
- Di Costanzo, A., et al. 2009. Homeodomain protein Dlx3 induces phosphorylation-dependent p63 degradation. *Cell Cycle* 8: 1185-1195.
- Aonurm-Helm, A., et al. 2010. NCAM-mimetic, FGL peptide, restores disrupted fibroblast growth factor receptor (FGFR) phosphorylation and FGFR mediated signaling in neural cell adhesion molecule (NCAM)-deficient mice. *Brain Res.* 1309: 1-8.
- Wang, W., et al. 2010. CD24-dependent MAPK pathway activation is required for colorectal cancer cell proliferation. *Cancer Sci.* 101: 112-119.
- Lou, Q., et al. 2014. The C-type lectin OCILRP2 costimulates EL4 T cell activation via the DAP12-Raf-MAP kinase pathway. *PLoS ONE* 9: e113218.

RESEARCH USE

For research use only, not for use in diagnostic procedures.