

Store at
-20°C

#2361

Phospho-c-Jun (Ser63) (54B3) Rabbit mAb

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Entrez-Gene ID #3725
UniProt ID #P05412

rev. 09/28/17

For Research Use Only. Not For Use In Diagnostic Procedures.

Applications
W, IHC-P
Endogenous

Species Cross-Reactivity*
H, M, R

Molecular Wt.
48 kDa

Isotype
Rabbit IgG**

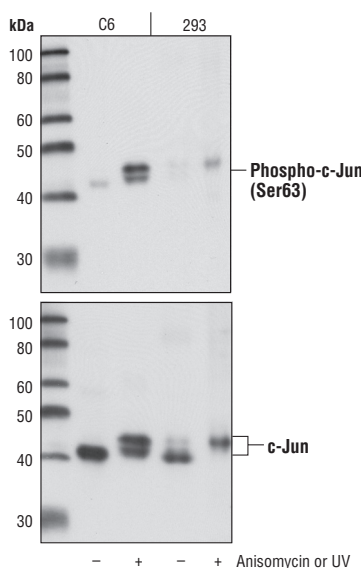
Background: c-Jun is a member of the Jun family containing c-Jun, JunB, and JunD, and is a component of the transcription factor activator protein-1 (AP-1). AP-1 is composed of dimers of Fos, Jun, and ATF family members and binds to and activates transcription at TRE/AP-1 elements (reviewed in 1). Extracellular signals including growth factors, chemokines, and stress activate AP-1-dependent transcription. The transcriptional activity of c-Jun is regulated by phosphorylation at Ser63 and Ser73 through SAPK/JNK (reviewed in 2). Knock-out studies in mice have shown that c-Jun is essential for embryogenesis (3), and subsequent studies have demonstrated roles for c-Jun in various tissues and developmental processes including axon regeneration (4), liver regeneration (5), and T cell development (6). AP-1 regulated genes exert diverse biological functions including cell proliferation, differentiation, and apoptosis, as well as transformation, invasion and metastasis, depending on cell type and context (7-9). Other target genes regulate survival, as well as hypoxia and angiogenesis (8,10). Research studies have implicated c-Jun as a promising therapeutic target for cancer, vascular remodeling, acute inflammation, and rheumatoid arthritis (11,12).

Specificity/Sensitivity: Phospho-c-Jun (Ser63) (54B3) Rabbit mAb detects endogenous levels of c-Jun only when phosphorylated at serine 63.

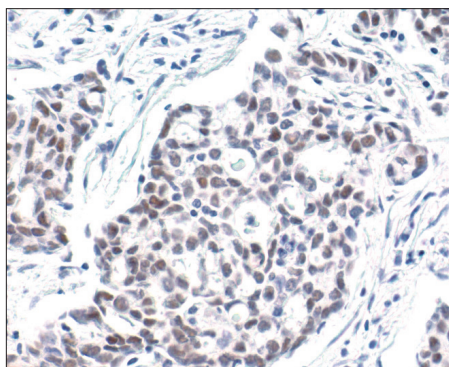
Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues around Ser63 of human c-Jun.

Background References:

- (1) Jochum, W. et al. (2001) *Oncogene* 20, 2401-12.
- (2) Davis, R.J. (2000) *Cell* 103, 239-52.
- (3) Hilberg, F. et al. (1993) *Nature* 365, 179-81.
- (4) Raivich, G. et al. (2004) *Neuron* 43, 57-67.
- (5) Behrens, A. et al. (2002) *EMBO J* 21, 1782-90.
- (6) Riera-Sans, L. and Behrens, A. (2007) *J Immunol* 178, 5690-700.
- (7) Leppä, S. and Bohmann, D. (1999) *Oncogene* 18, 6158-62.
- (8) Shaulian, E. and Karin, M. (2002) *Nat Cell Biol* 4, E131-6.
- (9) Weiss, C. and Bohmann, D. (2004) *Cell Cycle* 3, 111-3.
- (10) Karamouzis, M.V. et al. (2007) *Mol Cancer Res* 5, 109-20.
- (11) Kim, S. and Iwao, H. (2003) *J Pharmacol Sci* 91, 177-81.
- (12) Dass, C.R. and Choong, P.F. (2008) *Pharmazie* 63, 411-4.



Western blot analysis of extracts from untreated or anisomycin-treated C6 cells, or untreated or UV-treated 293 cells, using Phospho-c-Jun (Ser63) (54B3) Rabbit mAb (upper) or c-Jun (60A8) Rabbit mAb #9165 (lower).



Immunohistochemical analysis of paraffin-embedded human lung carcinoma, showing nuclear localization using Phospho-c-Jun (Ser63) (54B3) Rabbit mAb.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western Blotting	1:1000
Immunohistochemistry (Paraffin)	1:100
Unmasking buffer:	Citrate
Antibody diluent:	SignalStain® Antibody Diluent #8112
Detection reagent:	SignalStain® Boost (HRP, Rabbit) #8114

For product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.

U. S. Patent No. 5,675,063
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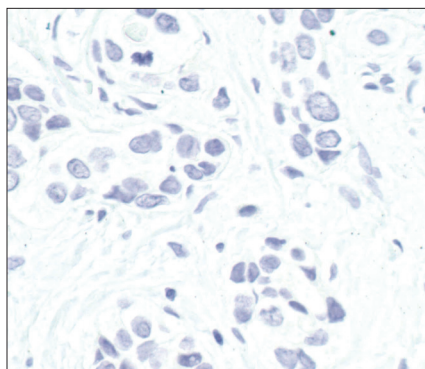
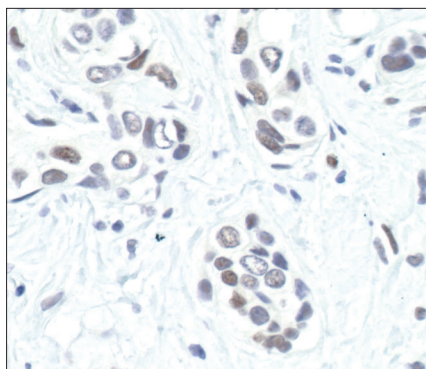
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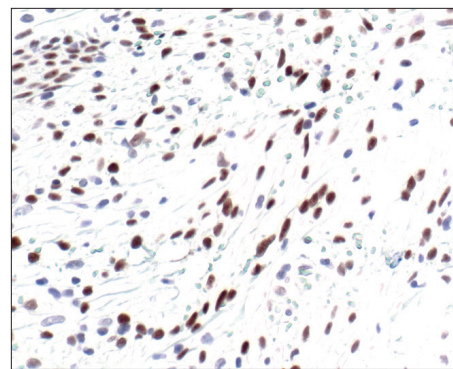


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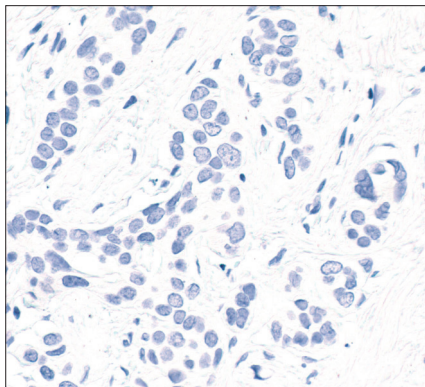
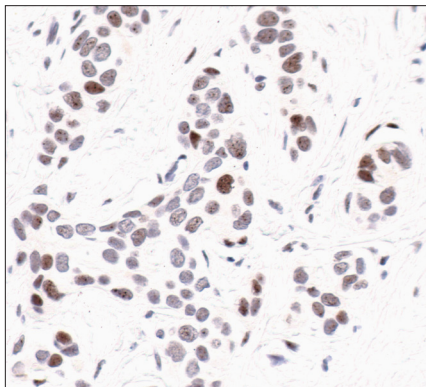
Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide **Species Cross-Reactivity:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected **Species** enclosed in parentheses are predicted to react based on 100% homology.



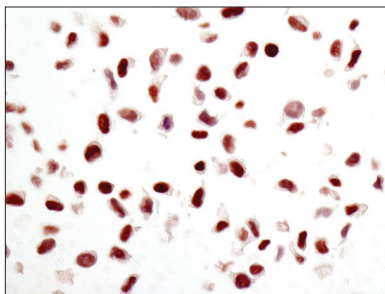
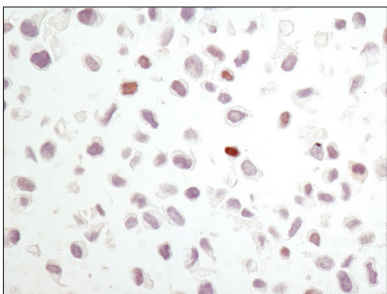
Immunohistochemical analysis of paraffin-embedded human breast carcinoma untreated (left) or λ phosphatase-treated (right) using Phospho-c-Jun (Ser63) (54B3) Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded human skin (normal adjacent to hemangioma) using Phospho-c-Jun (Ser63) (54B3) Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma using Phospho-c-Jun (Ser63) (54B3) Rabbit mAb in the presence of control peptide (left) or Phospho-c-Jun (Ser63) II Blocking Peptide (#1020) (right).



Immunohistochemical analysis of paraffin-embedded NIH/3T3 cell pellets, control (left) or anisomycin-treated (right), using Phospho-c-Jun (Ser63) (54B3) Rabbit mAb.