#1030 Store at -20°C

Phospho-c-Jun (Ser73) Blocking Peptide

☑ 100 µg
(10 western blots)

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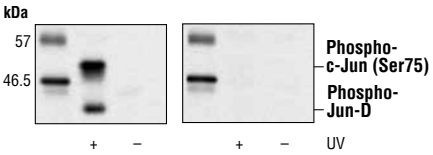
Description: This peptide is used to block Phospho-c-Jun (Ser73) Antibody #9164 reactivity by western blot and Phospho-c-Jun (Ser73) (D47G9) XP® Rabbit mAb #3270 by immunohistochemistry.

Background: c-Jun is a member of the Jun Family containing c-Jun, JunB and JunD, and is a component of the transcription factor AP-1 (activator protein-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). c-Jun has emerged as a promising therapeutic target for cancer, vascular remodeling, acute inflammation, as well as rheumatoid arthritis (11,12).

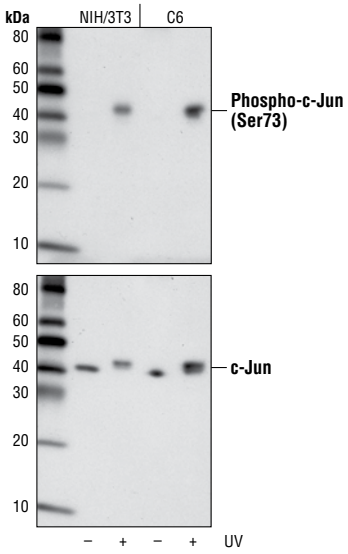
Quality Control: The quality of the peptide was evaluated by reversed-phase HPLC and by mass spectrometry. The peptide blocks Phospho-c-Jun (Ser73) Antibody #9164 signal completely in western blotting and Phospho-c-Jun (Ser73) (D47G9) XP® Rabbit mAb #3270 signal completely in immunohistochemistry.

Applications: Use as a blocking reagent to evaluate the specificity of antibody reactivity in western immunoblotting and immunohistochemistry.

Directions For Use: For western immunoblotting, add 10 µl of antibody and 10 µl of blocking peptide to 10 ml of antibody dilution buffer, and incubate at room temperature for 30 minutes before allowing to react with the blot. For immunohistochemistry, add twice the volume of peptide as volume of antibody used in 100 µl total volume. Incubate for a minimum of 30 minutes prior to adding the entire volume to the slide. Recommended antibody dilutions can be found on the Phospho-c-Jun (Ser73) (D47G9) XP® Rabbit mAb #3270 data sheet.



Western blot analysis of lysates from NIH/3T3 cells treated and untreated with UV light. Both membranes were probed with Phospho-c-Jun (Ser73) Antibody #9164 (left) and the same antibody preincubated with antigen-specific blocking peptide (right).

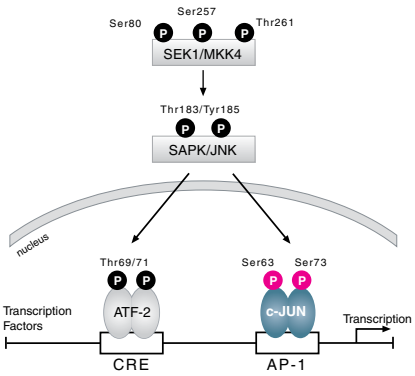


Western blot analysis of extracts from NIH/3T3 or C6 cells, untreated or UV-treated, using Phospho-c-Jun (Ser73) (D47G9) XP® Rabbit mAb (upper) or c-Jun (60A8) Rabbit mAb #9165 (lower).

Storage: Supplied in 20 mM potassium phosphate (pH 7.0), 50 mM NaCl, 0.1 mM EDTA, 1 mg/ml BSA and 5% glycerol. Store at –20°C.

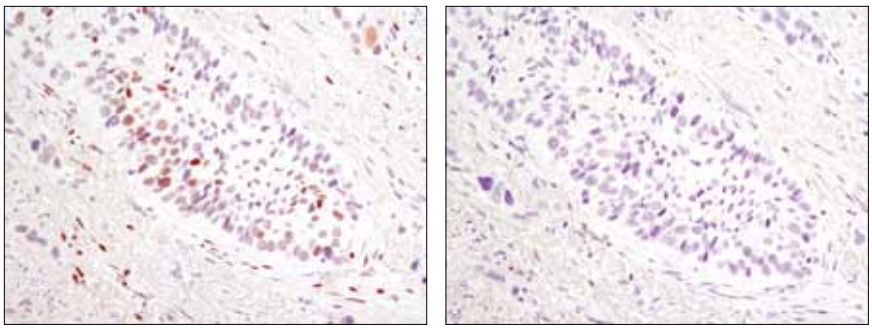
Background References:

(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.



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.

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide
Species Cross-Reactivity Key: **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 parafin-embedded human colon carcinoma using Phospho-c-Jun (Ser73) (D47G9) XP® Rabbit mAb in the presence of control peptide (left) or Phospho-c-Jun (Ser73) Blocking Peptide (right).