#9811 Store at -20°C

c-Jun Fusion Protein Beads

☑ Concentration: 0.8 mL at 35 µg/mL

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rev. 04/27/16

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

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 promising therapeutic target for cancer, vascular remodeling, acute inflammation, as well as rheumatoid arthritis (11-13).

Description: c-Jun Fusion Protein Beads selectively "pull down" SAPK/JNK and also serve as a useful substrate to measure SAPK/JNK activity. It is expressed as a recombinant protein fusion to amino acid residues corresponding to c-Jun codons 1-89. The fusion protein is produced in *E. coli* and is supplied as a 50% slurry of c-Jun Fusion Protein beads.

It is supplied as a 50% slurry of GST-c-Jun beads.

Molecular Weight: 35 kDa

Directions for Use: Prior to use, put the tube on ice for 5 minutes to lower viscosity of buffer. Then beads should be resuspended to a 50% slurry by inversion or **gentle** vortexing.

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) Weiss, C. and Bohmann, D. (2004) *Cell Cycle* 3, 111–3.

(13) Dass, C.R. and Choong, P.F. (2008) *Pharmazie* 63, 411–4.

Storage Buffer:

20 mM Tris-HCl (pH 7.4)

150 mM NaCl

1 mM Na_2EDTA

1 mM EGTA

1% Triton X-100

2.5 mM sodium pyrophosphate

1 mM β-glycerophosphate

1 mM Na_3VO_4

1 µg/ml leupeptin

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