

Elk-1 Control Proteins

✓ Controls for 10 Western mini-blot

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Background: The transcription factor Elk-1 is a component of the ternary complex that binds the serum response element (SRE) and mediates gene activity in response to serum and growth factors (1-3). Elk-1 is phosphorylated by MAP kinase pathways at a cluster of S/T motifs at its carboxy terminus; phosphorylation at these sites, particularly Ser383, is critical for transcriptional activation by Elk-1. Elk-1 appears to be a direct target of activated MAP kinase: (a) biochemical studies indicate that Elk-1 is a good substrate for MAP kinase; (b) the kinetics of Elk-1 phosphorylation and activation correlate with MAP kinase activity; (c) interfering mutants of MAP kinase block Elk-1 activation *in vivo*. Other studies have shown that Elk-1 (Ser383) is also a target of the stress-activated kinase SAPK/JNK (4,5).

Description:

Nonphosphorylated Elk1 fusion protein: Bacterially expressed GST-Elk1 fusion protein serves as a negative control. Supplied in SDS Sample Buffer. Store at -20°C.

Phosphorylated Elk1 fusion protein: GST-Elk1 Phosphorylated by the Erk2 enzyme serves as a positive control. Supplied in SDS Sample Buffer. Store at -20°C.

Notes on Use: As controls, we recommend using 15 µl of phosphorylated and nonphosphorylated Elk1 control extracts. Boil sample prior to loading.

Background References:

- (1) Marais, R. et al. (1993) *Cell* 73, 381-393.
- (2) Kortenjann, M. et al. (1994) *Mol. Cell. Biol.* 14, 4815-4824.
- (3) Hill, C.S. and Treisman, R. (1995) *Cell* 80, 199-211.
- (4) Cavigelli, M. et al. (1995) *EMBO J.* 14, 5957-5964.
- (5) Whitmarsh, A.J. et al. (1995) *Science* 269, 403-407.

Storage: Supplied in SDS Sample Buffer: 62.5 mM Tris-HCl (pH 6.8 at 25°C), 2% w/v SDS, 10% glycerol, 50 mM DTT, 0.01% w/v phenol red. Store at -20°C.

Companion Products:

- PhosphoPlus® Elk-1 (Ser383) Antibody Kit #9180
- Phospho-Elk-1 (Ser383) Antibody #9181
- Phospho-Elk-1 (Ser383) (2B1) Mouse mAb #9186
- Elk-1 Antibody #9182
- Anti-rabbit IgG, HRP-linked Antibody #7074
- Prestained Protein Marker, Broad Range (Premixed Format) #7720
- Biotinylated Protein Ladder #7727
- 20X LumiGLO® Reagent and 20X Peroxide #7003

