

## Product Information

### ANTI-phospho-Elk-1 (phosphoserine 383)

Developed in Rabbit, Affinity Isolated Antibody

Product Number **E 3526**

#### Product Description

Anti-phospho-Elk-1 is developed in rabbit using a synthetic phospho-Ser383 peptide corresponding to residues around Ser383 of human Elk-1, conjugated to KLH, as immunogen. The antibody is affinity-purified using the protein A and peptide affinity chromatography.

Anti-phospho-Elk-1 detects Elk-1 protein only when phosphorylated at Ser383. The antibody reacts with human, rat, and mouse phospho-Elk-1. The antibody may be used for immunoblotting.

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.<sup>1-3</sup> Elk-1 is phosphorylated by MAP kinase pathways at a cluster of S/T motifs at its C-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. Biochemical studies indicate that Elk-1 is a good substrate for MAP kinase, the kinetics of Elk-1 phosphorylation and activation correlate with MAP kinase activity, and interfering mutants of MAP kinase block Elk-1 activation *in vivo*. More recent studies have shown that Elk-1 (Ser383) is also a target of the Stress Activated Kinase SAPK/JNK.<sup>4,5</sup>

#### Reagents

Anti-phospho-Elk-1 supplied as an affinity isolated antibody in 10 mM sodium HEPES, pH 7.5, containing 150 mM sodium chloride, 100 µg/ml bovine serum albumin and 50% glycerol.

#### Storage/Stability

Store at -20 °C. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

#### Product Profile

Recommended working dilution is 1:1,000 for immunoblotting (chemiluminescent) using Elk-1 fusion protein phosphorylated with purified Erk2. Low levels of endogenous Elk-1 protein present in most cell types makes it difficult to detect by immunoblotting. Overexpression of Elk-1 by transfection or immunoprecipitation, followed by immunoblotting will help improve detection. For immunoblotting, incubate membrane with diluted antibody in 5% bovine serum albumin (BSA), 1×Tris buffered saline and 0.1% Tween-20 at 2-8 °C with gentle shaking, overnight.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working dilution by titration test.

#### References

1. Marais, R., et al., *Cell*, **73**, 381-393 (1993).
2. Kortenjann, M., et al., *Mol. Cell. Biol.*, **14**, 4815-4824 (1994).
3. Hill, C.S., and Treisman, R., *Cell*, **80**, 199-211 (1995).
4. Cavigelli, M., et al., *EMBO*, **14**, 5957-5964 (1995).
5. Whitmarsh, A.J., et al., *Science*, **260**, 403-406 (1995).

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