

p-Elk-1 (Ser 383): sc-135646

BACKGROUND

Members of the Ets gene family exhibit varied patterns of tissue expression and share a highly conserved carboxy terminal domain containing a sequence related to the SV40 large T antigen nuclear localization signal sequence. This conserved domain is essential for Ets-1 binding to DNA and is likely responsible for the DNA binding activity of all members of the Ets gene family. ELK-1 is a 428 amino acid nuclear protein belonging to the Ets family. Expressed in lung and testis, ELK-1 stimulates transcription and binds to purine-rich DNA sequences. Upon mitogenic stimulation, ELK-1 is phosphorylated on C-terminal serine and threonine residues by MAPK1 (mitogen-activated protein kinase 1). Phosphorylation of ELK-1 leads to loss of SUMOylation and restores transcriptional activator activity. SUMOylation of ELK-1 results in recruitment of HDAC2 to target gene promoters, which leads to decreased histone acetylation and reduced transactivator activity.

CHROMOSOMAL LOCATION

Genetic locus: ELK1 (human) mapping to Xp11.23; Elk1 (mouse) mapping to X A1.3.

SOURCE

p-Elk-1 (Ser 383) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Ser 383 phosphorylated Elk-1 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

p-Elk-1 (Ser 383) is recommended for detection of Ser 383 phosphorylated Elk-1 of human origin, correspondingly phosphorylated Ser 384 of mouse origin and correspondingly phosphorylated Ser 382 of rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Elk-1 siRNA (h): sc-35290, Elk-1 siRNA (m): sc-35291, Elk-1 shRNA Plasmid (h): sc-35290-SH, Elk-1 shRNA Plasmid (m): sc-35291-SH, Elk-1 shRNA (h) Lentiviral Particles: sc-35290-V and Elk-1 shRNA (m) Lentiviral Particles: sc-35291-V.

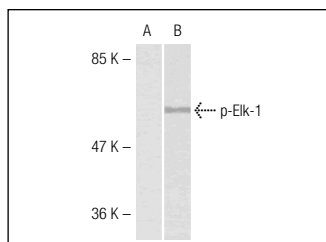
Molecular Weight of p-Elk-1: 62 kDa.

Positive Controls: HeLa + UV cell lysate: sc-2221 or HeLa + PMA cell lysate: sc-2258.

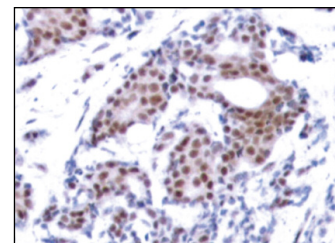
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



p-Elk-1 (Ser 383): sc-135646. Western blot analysis of phosphorylated Elk-1 expression in untreated (A) and UV-treated (B) HeLa cell extracts.



p-Elk-1 (Ser 383): sc-135646. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue showing nuclear localization.

SELECT PRODUCT CITATIONS

- Fan, Q.W., et al. 2003. Combinatorial efficacy achieved through two-point blockade within a signaling pathway—a chemical genetic approach. *Cancer Res.* 63: 8930-8938.
- Coogan, A.N., et al. 2003. Circadian and photic regulation of phosphorylation of ERK1/2 and Elk-1 in the suprachiasmatic nuclei of the Syrian hamster. *J. Neurosci.* 23: 3085-3093.
- Ronkina, N., et al. 2011. Stress induced gene expression: a direct role for MAPKAP kinases in transcriptional activation of immediate early genes. *Nucleic Acids Res.* 39: 2503-2518.
- Zhang, X., et al. 2011. Genome-wide analysis reveals PADI4 cooperates with Elk-1 to activate c-Fos expression in breast cancer cells. *PLoS Genet.* 7: e1002112.
- Hennenberg, M., et al. 2012. Silodosin inhibits noradrenaline-activated transcription factors Elk1 and SRF in human prostate smooth muscle. *PLoS ONE* 7: e50904.



Try **p-Elk-1 (B-4): sc-8406** or **p-Elk-1 (35.Ser 383): sc-293131**, our highly recommended monoclonal alternatives to p-Elk-1 (Ser 383). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **p-Elk-1 (B-4): sc-8406**.