

p-Elk-1 (Ser 383): sc-7979

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, ELK4 (human) mapping to 1q32.1; Elk1 (mouse) mapping to X A1.3, Elk4 (mouse) mapping to 1 E4.

SOURCE

p-Elk-1 (Ser 383) is available as either goat (sc-7979) or rabbit (sc-7979-R) affinity purified polyclonal antibody raised against a short amino acid sequence containing Ser 383 phosphorylated Elk-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7979 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-7979 X, 200 µg/0.1 ml.

APPLICATIONS

p-Elk-1 (Ser 383) is recommended for detection of Ser 383 phosphorylated Elk-1 and, to a lesser extent, with correspondingly phosphorylated SAP-1 of mouse, rat and human 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

p-Elk-1 (Ser 383) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

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

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

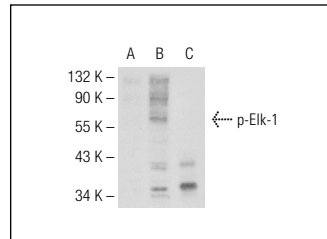
RESEARCH USE

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

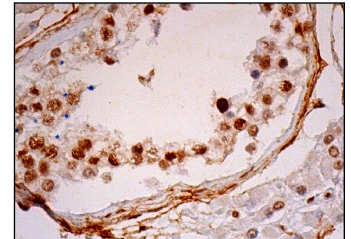
STORAGE

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

DATA



p-Elk-1 (Ser 383)-R: sc-7979-R. Western blot analysis of Elk-1 phosphorylation in untreated (A), UV irradiated (B) and UV irradiated and lambda protein phosphatase treated (C) HeLa whole cell lysates.



p-Elk-1 (Ser 383): sc-7979. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear staining of cells in seminiferous ducts and Leydig cells.

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.
- Bordin, S., et al. 2003. Cutting edge: proliferating fibroblasts respond to collagenous C1q with phosphorylation of p38 mitogen-activated protein kinase and apoptotic features. *J. Immunol.* 170: 667-671.
- Nandiwada, S.L., et al. 2006. p300/Cyclic AMP-responsive element binding-binding protein mediates transcriptional coactivation by the CD28 T cell costimulatory receptor. *J. Immunol.* 177: 401-413.
- Hsieh, H.L., et al. 2008. Bradykinin induces matrix metalloproteinase-9 expression and cell migration through a PKC-δ-dependent ERK/Elk-1 pathway in astrocytes. *Glia* 56: 619-632.
- Garczarczyk, D., et al. 2009. Signal transduction of constitutively active protein kinase C ε. *Cell. Signal.* 21: 745-752.
- Pikkarainen, S., et al. 2009. Regulation of expression of the rat orthologue of mouse double minute 2 (MDM2) by H₂O₂-induced oxidative stress in neonatal rat cardiac myocytes. *J. Biol. Chem.* 284: 27195-27210.
- Wang, H.H., et al. 2010. Oxidized low-density lipoprotein-induced matrix metalloproteinase-9 expression via PKC-δ/p42/p44 MAPK/Elk-1 cascade in brain astrocytes. *Neurotox. Res.* 17: 50-65.
- Jeanes, A.I., et al. 2012. Specific β-containing integrins exert differential control on proliferation and two-dimensional collective cell migration in mammary epithelial cells. *J. Biol. Chem.* 287: 24103-24112.


 MONOS
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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**.