

Egr-1 (588): sc-110

BACKGROUND

Egr-1, Egr-2, Egr-3 and Egr-4 are nuclear transcription factors belonging to the EGR C₂H₂-type zinc-finger protein family and containing 3 C₂H₂-type zinc fingers. As immediate early proteins, Egr transcription factors are rapidly induced by diverse extracellular stimuli. Egr proteins are subject to tight differential control through diverse mechanisms at several levels of regulation including transcriptional, translational and post-translational (including glycosylation, phosphorylation and redox) mechanisms and protein-protein interaction. Egr-1 binds to the DNA sequence 5'-CGCCCCGC-3' (EGR-site), thereby activating transcription of target genes whose products are required for mitogenesis and differentiation. Egr-2 binds specific DNA sites located in the promoter region of HOXA4. Egr-2 defects cause congenital hypomyelination neuropathy (also designated Charcot-Marie-Tooth disease) and Dejerine-Sottas neuropathy (also designated hereditary motor and sensory neuropathy III). Egr-3 is involved in muscle spindle development and is expressed in T cells 20 minutes following activation. EGR-4 binds to the EGR consensus motif GCGTGGGCG, functions as a transcriptional repressor, and displays autoregulatory activities, downregulating its own gene promoter in a dose dependent manner.

CHROMOSOMAL LOCATION

Genetic locus: EGR1 (human) mapping to 5q31.2; Egr1 (mouse) mapping to 18 B1.

SOURCE

Egr-1 (588) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of Egr-1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-110 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-110 X, 200 µg/0.1 ml.

APPLICATIONS

Egr-1 (588) is recommended for detection of Egr-1 p82 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). Egr-1 (588) is also recommended for detection of Egr-1 p82 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for Egr-1 siRNA (h): sc-29303, Egr-1 siRNA (m): sc-35267, Egr-1 shRNA Plasmid (h): sc-29303-SH, Egr-1 shRNA Plasmid (m): sc-35267-SH, Egr-1 shRNA (h) Lentiviral Particles: sc-29303-V and Egr-1 shRNA (m) Lentiviral Particles: sc-35267-V.

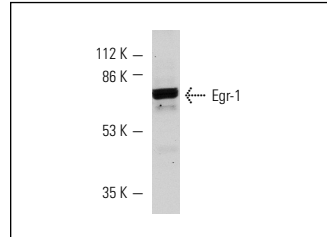
Egr-1 (588) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Egr-1: 82 kDa.

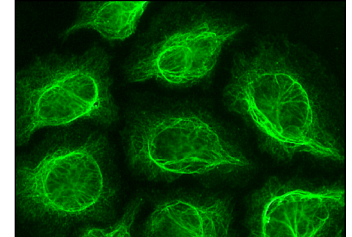
STORAGE

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

DATA



Egr-1 (588): sc-110. Western blot analysis of Egr-1 expression in NIH/3T3 whole cell lysate.



Egr-1 (588): sc-110. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

- Sells, S.F., et al. 1995. The zinc finger transcription factor Egr-1 impedes interleukin-1-inducible tumor growth arrest. *Mol. Cell. Biol.* 15: 682-692.
- Been, L.E., et al. 2011. Chemosensory and hormone information are relayed directly between the medial amygdala, posterior bed nucleus of the stria terminalis, and medial preoptic area in male Syrian hamsters. *Horm. Behav.* 59: 536-548.
- Gao, J., et al. 2011. Curcumin inhibits renal cyst formation and enlargement *in vitro* by regulating intracellular signaling pathways. *Eur. J. Pharmacol.* 654: 92-99.
- Kim, J.H., et al. 2011. Brain-derived neurotrophic factor uses CREB and Egr3 to regulate NMDA receptor levels in cortical neurons. *J. Neurochem.* 120: 210-219.
- Yang, J.H., et al. 2011. Effects of lanthanum chloride on the expression of immediate early genes in the hippocampus of rats. *Zhonghua Yu Fang Yi Xue Za Zhi* 45: 340-343.
- Howie, H.L., et al. 2011. β-HPV 5 and 8 E6 promote p300 degradation by blocking AKT/p300 association. *PLoS Pathog.* 7: e1002211.
- Pupo, M., et al. 2012. Bisphenol A induces gene expression changes and proliferative effects through GPER in breast cancer cells and cancer-associated fibroblasts. *Environ. Health Perspect.* 120: 1177-1182.

RESEARCH USE

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



Try **Egr-1 (S-25): sc-101033** or **Egr-1 (8A6): sc-293180**, our highly recommended monoclonal alternatives to Egr-1 (588).