SANTA CRUZ BIOTECHNOLOGY, INC.

Egr-3 (H-180): sc-22801

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Egr-1, Egr-2, Egr-3 and Egr-4 are nuclear transcription factors belonging to the Egr C_2H_2-type zinc-finger protein family and containing three C_2H_2-type zinc fingers. As immediate early proteins, Egr transcription factors are rapidly induced by diverse extracellular stimuli. They are subject to tight differential control through diverse mechanisms at several levels of regulation: transcriptional; translational and posttranslational (including glycosylation, phosphorylation and redox) mechanisms; and protein-protein interaction. Egr-3 is involved in muscle spindle development and is expressed in T cells 20 minutes following activation.

REFERENCES

1. Beckmann, A.M. and Wilce, P.A. 1997. Egr transcription factors in the nervous system. Neurochem. Int. 31: 477-510.
2. Zipfel, P.F., et al. 1997. The human zinc finger protein Egr-4 acts as autoregulatory transcriptional repressor. Biochim. Biophys. Acta 1354: 134-144.
3. O'Donovan, K.J., et al. 1998. Sequential expression of Egr-1 and Egr-3 in hippocampal granule cells following electroconvulsive stimulation. J. Neurochem. 70: 1241-1248.

4 Mittelstadt, P.R., et al. 1998. Cyclosporin A-sensitive transcription factor Egr-3 regulates Fas ligand expression. Mol. Cell. Biol. 18: 3744-3751.

5. Xiao, S., et al. 1999. Fas_L promoter activation by IL-2 through SP1 and NFAT but not Egr-2 and Egr-3. Eur. J. Immunol. 29: 3456-3465.
6. Depaz, I.M., et al. 2000. Chronic ethanol has region-selective effects on Egr-1 and Egr-3 DNA-binding activity and protein expression in the rat brain. Neurochem. Int. 37: 473-482.

CHROMOSOMAL LOCATION

Genetic locus: EGR3 (human) mapping to 8p21.3; Egr3 (mouse) mapping to 14 D2.

SOURCE

Egr-3 (H-180) is an affinity purified rabbit polyclonal antibody raised against amino acids 1-180 of Egr-3 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.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-22801 X, 200 µg/0.1 ml.

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

Egr-3 (H-180) is recommended for detection of Egr-3 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-3 (H-180) is also recommended for detection of Egr-3 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for Egr-3 siRNA (h): sc-35268, Egr-3 siRNA (m): sc-35269, Egr-3 shRNA Plasmid (h): sc-35268-SH, Egr-3 shRNA Plasmid (m): sc-35269-SH, Egr-3 shRNA (h) Lentiviral Particles: sc-35268-V and Egr-3 shRNA (m) Lentiviral Particles: sc-35269-V.

Egr-3 (H-180) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Egr-3: 43 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206.

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 A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 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.

SELECT PRODUCT CITATIONS

1. Li, B., et al. 2006. *De novo* synthesis of early growth response factor-1 is required for the full responsiveness of mast cells to produce TNF and IL-13 by IgE and antigen stimulation. Blood 107: 2814-2820.
2. Li, B., et al. 2007. The early growth response factor-1 is involved in stem cell factor (SCF)-induced interleukin 13 production by mast cells, but is dispensable for SCF-dependent mast cell growth. J. Biol. Chem. 282: 22573-22581.
3. Rumsey, J.W., et al. 2008. Tissue engineering intrafusal fibers: dose- and time-dependent differentiation of nuclear bag fibers in a defined *in vitro* system using neuregulin 1-β-1. Biomaterials 29: 994-1004.