

Egr-2 (H-220): sc-20690

BACKGROUND

Egr proteins function in transcription regulatory activities surrounding cellular growth, differentiation and function. The deduced amino acid sequences of human Egr-2 and mouse Egr-1 are 92% identical in the zinc finger region but show no homology elsewhere. Egr-2 is a sequence-specific DNA-binding transcription factor that binds two specific DNA sites located in the promoter region of HoxA4 and localizes to the nucleus. Defects in the Egr-2 protein are a cause of congenital hypomyelination neuropathy (CHN). CHN is characterized clinically by early onset of hypotonia, areflexia, distal muscle weakness and very slow nerve conduction velocities. Mutations in the gene that encodes Egr-2 (EGR2) also cause of Dejerine-Sottas syndrome (DSS), which is also known as Dejerine-Sottas neuropathy (DSN) or hereditary motor and sensory neuropathy III (HMSN3). DSS patients exhibit severe early onset motor and sensory neuropathy with very slow nerve conduction velocities and elevated cerebrospinal fluid protein concentrations.

CHROMOSOMAL LOCATION

Genetic locus: EGR2 (human) mapping to 10q21.3; Egr2 (mouse) mapping to 10 B5.1.

SOURCE

Egr-2 (H-220) is a rabbit polyclonal antibody raised against amino acids 1-220 of Egr-2 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-20690 X, 200 µg/0.1 ml.

APPLICATIONS

Egr-2 (H-220) is recommended for detection of Egr-2 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-2 (H-220) is also recommended for detection of Egr-2 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for Egr-2 siRNA (h): sc-37827, Egr-2 siRNA (m): sc-37828, Egr-2 shRNA Plasmid (h): sc-37827-SH, Egr-2 shRNA Plasmid (m): sc-37828-SH, Egr-2 shRNA (h) Lentiviral Particles: sc-37827-V and Egr-2 shRNA (m) Lentiviral Particles: sc-37828-V.

Egr-2 (H-220) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

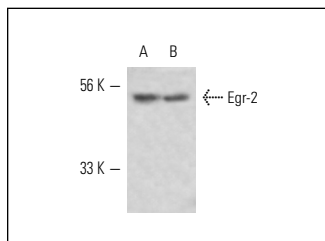
Molecular Weight of Egr-2: 50 kDa.

Positive Controls: Hep G2 nuclear extract: sc-364819 or LADMAC nuclear extract.

STORAGE

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

DATA



Egr-2 (H-220): sc-20690. Western blot analysis of Egr-2 expression in Hep G2 (A) and LADMAC (B) nuclear extracts.

SELECT PRODUCT CITATIONS

1. Yoo, Y.G., et al. 2004. Hepatitis B virus X protein induces expression of Fas ligand gene through enhancing transcriptional activity of early growth response factor. *J. Biol. Chem.* 279: 36242-36249.
2. Schwarzenbach, H., et al. 2004. Gonadotropin-mediated regulation of the murine VEGF expression in MA-10 Leydig cells. *J. Androl.* 25: 128-139.
3. Wang, S.S., et al. 2013. Early growth response 2 (Egr2) plays opposing roles in committing C3H10T1/2 stem cells to adipocytes and smooth muscle-like cells. *Int. J. Biochem. Cell Biol.* 45: 1825-1832.
4. Kurita, M., et al. 2013. Repressive epigenetic changes at the mGlu2 promoter in frontal cortex of 5-HT2A knockout mice. *Mol. Pharmacol.* 83: 1166-1175.
5. Giacomelli, F., et al. 2013. Identification and characterization of regulatory elements in the promoter of ACVR1, the gene mutated in Fibrodysplasia Ossificans Progressiva. *Orphanet J. Rare Dis.* 8: 145.
6. Lee, M.Y., et al. 2014. N-acetylcysteine modulates hallucinogenic 5-HT2A receptor agonist-mediated responses: behavioral, molecular, and electrophysiological studies. *Neuropharmacology* 81: 215-223.
7. Miyamoto, Y., et al. 2015. Involvement of the Tyro3 receptor and its intracellular partner Fyn signaling in Schwann cell myelination. *Mol. Biol. Cell* 26: 3489-3503.

RESEARCH USE

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



Try **Egr-2 (1G5): sc-293195**, our highly recommended monoclonal alternative to Egr-2 (H-220).