

Egr-2 (N-20): sc-20450

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.

REFERENCES

- Joseph, L.J., et al. 1988. Molecular cloning, sequencing, and mapping of EGR2, a hu gene encoding a protein with "zinc-binding finger" structure. Proc. Natl. Acad. Sci. USA 85: 7164-7168.
- Chavrier, P., et al. 1989. Structure, chromosome location, and expression of the mouse zinc finger gene Krox-20: multiple gene products and coregulation with the proto-oncogene c-Fos. Mol. Cell. Biol. 9: 787-797.
- Timmerman, V., et al. 1999. Novel missense mutation in the early growth response 2 gene associated with Dejerine-Sottas syndrome phenotype. Neurology 52: 1827-1832.

CHROMOSOMAL LOCATION

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

SOURCE

Egr-2 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus 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.

Blocking peptide available for competition studies, sc-20450 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-20450 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-2 (N-20) 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 (N-20) is also recommended for detection of Egr-2 in additional species, including equine, canine, bovine and porcine.

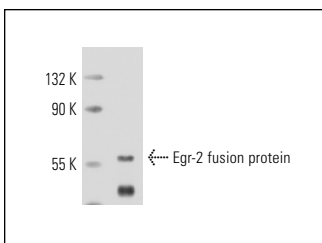
Suitable for use as control antibody for Egr-2 siRNA (h): sc-37827, Egr-2 siRNA (m): sc-37828, Egr-2 shRNA Plasmid (h): sc-37827-SH, Egr-2 shRNA Plasmid (m): sc-37828-SH, Egr-2 shRNA (h) Lentiviral Particles: sc-37827-V and Egr-2 shRNA (m) Lentiviral Particles: sc-37828-V.

Egr-2 (N-20) 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-384819.

DATA



Egr-2 (N-20): sc-20450. Western blot analysis of human recombinant Egr-2 fusion protein.

SELECT PRODUCT CITATIONS

- Moreno-González, G., et al. 2008. Transcription of the chicken Grin1 gene is regulated by the activity of SP3 and NRSF in undifferentiated cells and neurons. Biosci. Rep. 28: 177-188.
- 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.

PROTOCOLS

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Try **Egr-2 (1G5): sc-293195**, our highly recommended monoclonal alternative to Egr-2 (N-20).