

NR2E1 (N-16): sc-79573

BACKGROUND

NR2 proteins are a large family of nuclear hormone receptor transcription factors. The proteins belonging to this family are characterized by discrete domains functioning in DNA and ligand binding. NR2E1 (nuclear receptor subfamily 2, group E, member 1), also known as TLX, is an essential component in the formation of synaptic plasticity and dendritic structure in retinal astrocytes. In addition, NR2E1 is an orphan receptor that binds DNA as part of the hormone response element (HRE), a transcription regulator for hormones. DNA-binding orphan receptors have the conserved sequence 5'-AAG-GTCA-3', a motif that determines substrate binding specificity. NR2E1 is expressed in brain tissue, with highest levels in astrocytes, and is localized to the nucleus. Mutations in the gene that encodes NR2E1 may lead to retinal dystrophy, a disorder characterized by a reduction in the thickness of the retina.

REFERENCES

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2. Jackson, A., et al. 1998. The human homologue of the *Drosophila* tailless gene (TLX): characterization and mapping to a region of common deletion in human lymphoid leukemia on chromosome 6q21. *Genomics* 50: 34-43.
3. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603849. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Shi, Y., et al. 2004. Expression and function of orphan nuclear receptor TLX in adult neural stem cells. *Nature* 427: 78-83.
5. Zhang, C.L., et al. 2006. Nuclear receptor TLX prevents retinal dystrophy and recruits the corepressor atrophin-1. *Genes Dev.* 20: 1308-1320.
6. Christie, B.R., et al. 2006. Deletion of the nuclear receptor NR2E1 impairs synaptic plasticity and dendritic structure in the mouse dentate gyrus. *Neuroscience* 137: 1031-1037.
7. Sun, G., et al. 2007. Orphan nuclear receptor TLX recruits histone deacetylases to repress transcription and regulate neural stem cell proliferation. *Proc. Natl. Acad. Sci. USA* 104: 15282-15287.
8. Kumar, R.A., et al. 2007. Mutation and evolutionary analyses identify NR2E1-candidate-regulatory mutations in humans with severe cortical malformations. *Genes Brain Behav.* 6: 503-516.

CHROMOSOMAL LOCATION

Genetic locus: NR2E1 (human) mapping to 6q21; Nr2e1 (mouse) mapping to 10 B2.

SOURCE

NR2E1 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of NR2E1 of human origin.

STORAGE

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

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-79573 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-79573 X, 200 µg/0.1 ml.

APPLICATIONS

NR2E1 (N-16) is recommended for detection of NR2E1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

NR2E1 (N-16) is also recommended for detection of NR2E1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for NR2E1 siRNA (h): sc-75954, NR2E1 siRNA (m): sc-75955, NR2E1 shRNA Plasmid (h): sc-75954-SH, NR2E1 shRNA Plasmid (m): sc-75955-SH, NR2E1 shRNA (h) Lentiviral Particles: sc-75954-V and NR2E1 shRNA (m) Lentiviral Particles: sc-75955-V.

NR2E1 (N-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of NR2E1: 43 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210 or Jurkat whole cell lysate: sc-2204.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

RESEARCH USE

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



Try **NR2E1 (B-10): sc-377240** or **NR2E1 (EE-9): sc-100905**, our highly recommended monoclonal alternatives to NR2E1 (N-16).