SANTA CRUZ BIOTECHNOLOGY, INC.

NR2E1 (S-23): sc-133843

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 a 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'-AAGGTCA-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

1. Monaghan, A.P., et al. 1997. Defective limbic system in mice lacking the tailless gene. Nature 390: 515-517.
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.

CHROMOSOMAL LOCATION

Genetic locus: NR2E1 (human) mapping to 6q21.

SOURCE

NR2E1 (S-23) is an affinity purified rabbit polyclonal antibody raised against synthetic NR2E1 peptide of human origin.

PRODUCT

Each vial contains 50 µg IgG in 0.5 ml of PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

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

NR2E1 (S-23) is recommended for detection of NR2E1 of 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

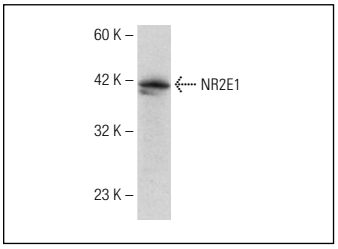
Molecular Weight of NR2E1: 43 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or human skin tissue.

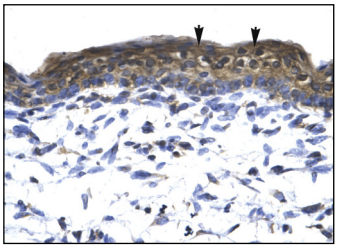
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



NR2E1 (S-23): sc-133843. Western blot analysis of NR2E1 expression in Jurkat whole cell lysate.



NR2E1 (S-23): sc-133843. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human skin tissue showing nuclear and cytoplasmic localization.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.