

NR2E1 (B-10): sc-377240

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 sub-family 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'-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 atrophin1. *Genes Dev.* 20: 1308-1320.

CHROMOSOMAL LOCATION

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

SOURCE

NR2E1 (B-10) is a mouse monoclonal antibody raised against amino acids 89-190 mapping within an internal region of NR2E1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-377240 X, 200 µg/0.1 ml.

NR2E1 (B-10) is available conjugated to agarose (sc-377240 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377240 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377240 PE), fluorescein (sc-377240 FITC), Alexa Fluor® 488 (sc-377240 AF488), Alexa Fluor® 546 (sc-377240 AF546), Alexa Fluor® 594 (sc-377240 AF594) or Alexa Fluor® 647 (sc-377240 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377240 AF680) or Alexa Fluor® 790 (sc-377240 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

NR2E1 (B-10) is recommended for detection of NR2E1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

NR2E1 (B-10) is also recommended for detection of NR2E1 in additional species, including equine, canine and porcine.

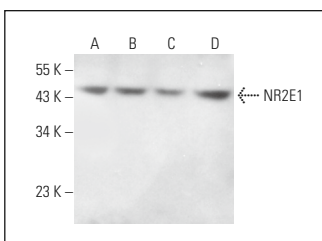
Suitable for use as control antibody for NR2E1 siRNA (h): sc-75954, NR2E1 siRNA (m): sc-75955, NR2E1 shRNA Plasmid (h): sc-75954-SH, NR2E1 shRNA Plasmid (m): sc-75955-SH, NR2E1 shRNA (h) Lentiviral Particles: sc-75954-V and NR2E1 shRNA (m) Lentiviral Particles: sc-75955-V.

NR2E1 (B-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

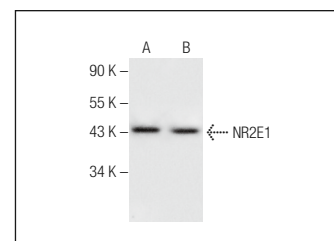
Molecular Weight of NR2E1: 43 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, K-562 whole cell lysate: sc-2203 or SH-SY5Y cell lysate: sc-3812.

DATA



NR2E1 (B-10): sc-377240. Western blot analysis of NR2E1 expression in Y79 (A), K-562 (B), EOC 20 (C) and C6 (D) whole cell lysates.



NR2E1 (B-10): sc-377240. Western blot analysis of NR2E1 expression in Jurkat (A) and SH-SY5Y (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Shi, X., et al. 2019. Nuclear receptor TLX regulates islet β cell proliferation via E2F6. *Biochem. Biophys. Res. Commun.* 513: 560-566.
2. Hu, R., et al. 2023. A NR2E1-interacting peptide of LSD1 inhibits the proliferation of brain tumour initiating cells. *Cell Prolif.* 56: e13350.

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.

PROTOCOLS

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