SANTA CRUZ BIOTECHNOLOGY, INC.

NR2E3 (B-4): sc-374513

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Photoreceptor-specific nuclear receptor, also known as NR2E3 or PNR, belongs to 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. NR2E3 has a role in regulating the signaling pathway elemental to the photoreceptor cell function and in regulating pathways involved in embryonic development. NR2E3 is an eye specific nuclear protein found in the outer nuclear layer of the adult retina (where the nuclei of cone and rod photoreceptors are located). Defects in this gene encoding for the protein, which localizes to chromosome 15q23, cause enhanced S cone syndrome.

CHROMOSOMAL LOCATION

Genetic locus: NR2E3 (human) mapping to 15q23; Nr2e3 (mouse) mapping to 9 B.

SOURCE

NR2E3 (B-4) is a mouse monoclonal antibody raised against amino acids 164-224 mapping within an internal region of NR2E3 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 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-374513 X, 200 µg/0.1 ml.

NR2E3 (B-4) is available conjugated to agarose (sc-374513 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-374513 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374513 PE), fluorescein (sc-374513 FITC), Alexa Fluor® 488 (sc-374513 AF488), Alexa Fluor® 546 (sc-374513 AF546), Alexa Fluor® 594 (sc-374513 AF594) or Alexa Fluor® 647 (sc-374513 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374513 AF680) or Alexa Fluor® 790 (sc-374513 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

NR2E3 (B-4) is recommended for detection of NR2E3 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).

Suitable for use as control antibody for NR2E3 siRNA (h): sc-45726, NR2E3 siRNA (m): sc-45727, NR2E3 shRNA Plasmid (h): sc-45726-SH, NR2E3 shRNA Plasmid (m): sc-45727-SH, NR2E3 shRNA (h) Lentiviral Particles: sc-45726-V and NR2E3 shRNA (m) Lentiviral Particles: sc-45727-V.

NR2E3 (B-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

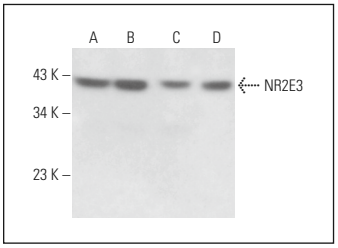
Molecular Weight of NR2E3: 42 kDa.

Positive Controls: LNCaP cell lysate: sc-2231, Hep G2 cell lysate: sc-2227 or HEL 92.1.7 cell lysate: sc-2270.

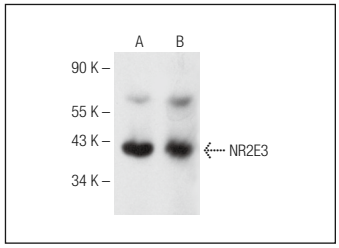
STORAGE

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

DATA



NR2E3 (B-4): sc-374513. Western blot analysis of NR2E3 expression in Hep G2 (**A**), TF-1 (**B**), HEL 92.1.7 (**C**) and RPE-J (**D**) whole cell lysates.



NR2E3 (B-4): sc-374513. Western blot analysis of NR2E3 expression in Hep G2 (**A**) and LNCaP (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Khanal, T., et al. 2017. Loss of NR2E3 represses AHR by LSD1 reprogramming, is associated with poor prognosis in liver cancer. Sci. Rep. 7: 10662.
2. Zhao, Z.H., et al. 2018. SOX2-mediated inhibition of miR-223 contributes to STIM1 activation in phenylephrine-induced hypertrophic cardiomyocytes. Mol. Cell. Biochem. 443: 47-56.
3. Reischmann, N., et al. 2020. $BRAF^{V600E}$ drives dedifferentiation in small intestinal and colonic organoids and cooperates with mutant p53 and Apc loss in transformation. Oncogene 39: 6053-6070.
4. Xie, S., et al. 2023. Regulation of the stem-like properties of estrogen receptor-positive breast cancer cells through NR2E3/NR2C2 signaling. Exp. Ther. Med. 26: 474.
5. Leung, Y.K., et al. 2024. The loss of an orphan nuclear receptor NR2E3 augments Wnt/β-catenin signaling via epigenetic dysregulation that enhances Sp1-β catenin-p300 interactions in hepatocellular carcinoma. Adv. Sci. 11: e2308539.
6. Ma, X., et al. 2024. Targeting NR2E3 to modulate Tet2 expression: therapeutic potential for depression treatment. Adv. Sci. 11: e2400726.

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.