SANTA CRUZ BIOTECHNOLOGY, INC.

Nur77 (C-19): sc-7013

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Nurr1 (Nur-related factor 1) and Nur77 (also designated NGFI-B) encode orphan nuclear receptors which may comprise an additional subfamily within the nuclear receptor superfamily. The rat and human homologs of mouse Nurr1 are designated RNR1 and NOT, respectively. Both Nurr1 and Nur77 are growth factor inducible immediate early response genes. Induction of both Nurr1 and Nur77 is seen after membrane depolarization while only Nur77 induction is seen with NGF stimulation. JunD acts as a mediator for Nur77. An increase in Nur77 expression is seen in activated T cells during G_0 to G_1 transition and throughout the G_1 phase. In addition to its function as an immediate early gene, Nur77 may play a role in TCR-mediated apoptosis. Cyclosporin A, a potent immunosuppressant, has been shown to inhibit the ability of Nur77 to bind DNA. A dominant negative form of Nur77 can protect T cell hybridomas from activation-induced apoptosis. However, the absolute requirement of Nur77 for TCR-mediated apoptosis is still under debate.

REFERENCES

1. Law, S.W., et al. 1992. Identification of a new brain-specific transcription factor, NURR1. Mol. Endocrinol. 6: 2129-2135.
2. Mages, H.W., et al. 1994. NOT, a human immediate-early response gene closely related to the steroid/thyroid hormone receptor NAK1/TR3. Mol. Endocrinol. 8: 1583-1591.
3. Davis, I.J., et al. 1994. Endocrine and neurogenic regulation of the orphan nuclear receptors Nur77 and Nurr-1 in the adrenal glands. Mol. Cell. Biol. 14: 3469-3483.
4. Yoon, J.K., et al. 1994. Involvement of JunD in transcriptional activation of the orphan receptor gene Nur77 by nerve growth factor and membrane depolarization in PC12 cells. Mol. Cell. Biol. 14: 7731-7743.
5. Garcia, I., et al. 1994. Induction of NGFI-B gene expression during T cell activation. Role of protein phosphatases. J. Immunol. 153: 3417-3425.

CHROMOSOMAL LOCATION

Genetic locus: NR4A1 (human) mapping to 12q13.13; Nr4a1 (mouse) mapping to 15 F2.

SOURCE

Nur77 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping to the C-terminus of Nur77 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG 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-7013 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-7013 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

Nur77 (C-19) is recommended for detection of Nur77 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).

Nur77 (C-19) is also recommended for detection of Nur77 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for Nur77 siRNA (h): sc-36109, Nur77 siRNA (m): sc-36110, Nur77 shRNA Plasmid (h): sc-36109-SH, Nur77 shRNA Plasmid (m): sc-36110-SH, Nur77 shRNA (h) Lentiviral Particles: sc-36109-V and Nur77 shRNA (m) Lentiviral Particles: sc-36110-V.

Nur77 (C-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Nur77: 64 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237.

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.

SELECT PRODUCT CITATIONS

1. Chtarbova, S., et al. 2002. Murine Nr4a1 and Herpud1 are up-regulated by Wnt-1, but the homologous human genes are independent from β-catenin activation. Biochem. J. 367: 723-728.
2. Kovalovsky, D., et al. 2002. Activation and induction of NUR77/NURR1 in corticotrophs by CRH/cAMP: involvement of calcium, protein kinase A, and MAPK pathways. Mol. Endocrinol. 16: 163.
3. Cho, Y., et al. 2004. Noise overstimulation induces immediate early genes in the rat cochlea. Brain Res. Mol. Brain Res. 130: 134-148.

STORAGE

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