SANTA CRUZ BIOTECHNOLOGY, INC.

Nur77 (M-210): sc-5569

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 G0 to G1 transition and throughout the G1 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. Endocrin. 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. Endocrin. 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 nur 77 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.
6. Winoto, A. 1994. Molecular characterization of the Nur77 orphan steroid receptor in apoptosis. Intl. Arch. All. Immunol. 105: 344-346.
7. Lee, S.L., et al. 1995. Unimpaired thymic and T cell death in mice lacking the nuclear receptor NGFI-B (Nur77). Science 269: 532-535.

SOURCE

Nur77 (M-210) is a rabbit polyclonal antibody raised against amino acids 59-269 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.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-5569 X, 200 µg/0.1 ml.

STORAGE

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

APPLICATIONS

Nur77 (M-210) 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), immunoprecipitation [1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Nur77 siRNA (h): sc-36109 and Nur77 siRNA (m): sc-36110.

Nur77 (M-210) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

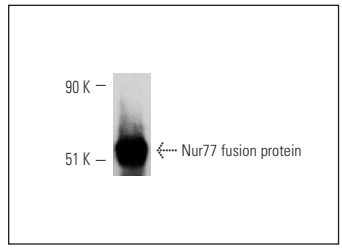
Molecular Weight of Nur77: 64 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, U-937 nuclear extract: sc-2156 or Jurkat nuclear extract: sc-2132.

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.

DATA



Nur77 (M-210): sc-5569. Western blot analysis of human recombinant Nur77 fusion protein.

RESEARCH USE

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

SELECT PRODUCT CITATIONS

1. Wu, W.S., et al. 2002. Promyelocytic leukemia protein PML inhibits Nur77-mediated transcription through specific functional interactions. Oncogene 21: 3925-3933.
2. Castro-Obregon, S., et al. 2004. Alternative, nonapoptotic programmed cell death: mediation by arrestin 2, ERK2, and Nur77. J. Biol. Chem. 279: 17543-17553.