

Nur77 (NR4AB9G12): sc-81344

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. Jun D 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. 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 neuro-genic regulation of the orphan nuclear receptors Nur77 and Nurr1 in the adrenal glands. *Mol. Cell. Biol.* 14: 3469-3483.
4. Yoon, J.K., et al. 1994. Involvement of Jun D 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.
6. Winoto, A. 1994. Molecular characterization of the Nur77 orphan steroid receptor in apoptosis. *Int. Arch. Allergy 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.

CHROMOSOMAL LOCATION

Genetic locus: NR4A1 (human) mapping to 12q13.13.

SOURCE

Nur77 (NR4AB9G12) is a mouse monoclonal antibody raised against a recombinant protein corresponding to an internal region of Nur77 of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% BSA.

STORAGE

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

APPLICATIONS

Nur77 (NR4AB9G12) is recommended for detection of Nur77 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for Nur77 siRNA (h): sc-36109, Nur77 shRNA Plasmid (h): sc-36109-SH and Nur77 shRNA (h2) Lentiviral Particles: sc-156146-V.

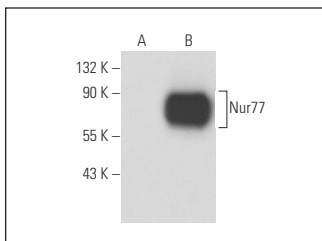
Molecular Weight of Nur77: 64 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237, U-937 nuclear extract: sc-2156 or Nur77 (h): 293T Lysate: sc-110000.

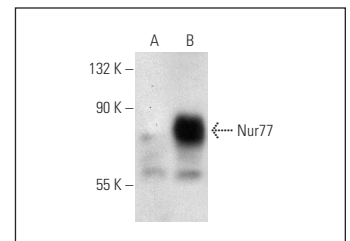
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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).

DATA



Nur77 (NR4AB9G12): sc-81344. Western blot analysis of Nur77 expression in non-transfected: sc-117752 (A) and human Nur77 transfected: sc-110000 (B) 293T whole cell lysates.



Nur77 (NR4AB9G12): sc-81344. Western blot analysis of Nur77 expression in non-transfected: sc-110760 (A) and human Nur77 transfected: sc-112240 (B) 293 whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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



See **Nur77 (C-5): sc-365113** for Nur77 antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.