

## Nurr1/Nur77 (E-20): sc-990

### 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<sub>0</sub>/G<sub>1</sub> transition and throughout the G<sub>1</sub> phase. In addition to its function as an immediate early gene, Nur77 may play a role in TCR-mediated apoptosis. Cyclosporin A, a potent immuno-suppressant, 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.

### CHROMOSOMAL LOCATION

Genetic locus: NR4A2 (human) mapping to 2q24.1, NR4A1 (human) mapping to 12q13.13; Nr4a2 (mouse) mapping to 2 C1.1, Nr4a1 (mouse) mapping to 15 F2.

### SOURCE

Nurr1/Nur77 (E-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of Nurr1 of rat 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-990 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-990 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

Nurr1/Nur77 (E-20) is recommended for detection of Nurr1 and Nur77 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Nurr1/Nur77 (E-20) is also recommended for detection of Nurr1 and Nur77 in additional species, including equine, canine, bovine, porcine and avian.

Nurr1/Nur77 (E-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Nurr1: 66 kDa.

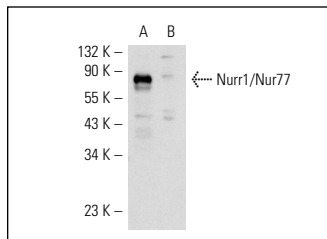
Molecular Weight of Nur77: 64 kDa.

Positive Controls: Nur77 (h2): 293 Lysate: sc-112240, SK-N-MC cell lysate: sc-2237 or SW-13 cell lysate: sc-24778.

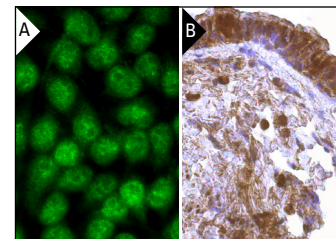
### STORAGE

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

### DATA



Nurr1/Nur77 (E-20): sc-990. Western blot analysis of Nurr1 and Nur77 expression in human Nurr1 transfected: sc-112240 (A) and non-transfected: sc-110760 (B) 293 whole cell lysates.



Nurr1/Nur77 (E-20): sc-990. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human bronchus tissue showing nuclear and cytoplasmic staining of respiratory epithelial cells (B).

### SELECT PRODUCT CITATIONS

- Gruber, F., et al. 2002. Direct binding of Nur77/NAK-1 to the plasminogen activator inhibitor 1 (PAI-1) promoter regulates TNF $\alpha$  -induced PAI-1 expression. *Blood* 101: 3042-3048.
- Szekeres, M., et al. 2009. Mechanisms of angiotensin II-mediated regulation of aldosterone synthase expression in H295R human adrenocortical and rat adrenal glomerulosa cells. *Mol. Cell. Endocrinol.* 302: 244-253.
- Schwartz, C.M., et al. 2010. Clathrin assembly proteins AP180 and CALM in the embryonic rat brain. *J. Comp. Neurol.* 518: 3803-3818.
- Tang, M., et al. 2010. Interactions of Wnt/ $\beta$ -catenin signaling and sonic hedgehog regulate the neurogenesis of ventral midbrain dopamine neurons. *J. Neurosci.* 30: 9280-9291.
- Mashanov, V.S., et al. 2010. Organization of glial cells in the adult sea cucumber central nervous system. *Glia* 58: 1581-1593.
- Fedeli, D., et al. 2012. Leukocyte Nurr1 as peripheral biomarker of early-life environmental exposure to permethrin insecticide. *Biomarkers* 17: 604-609.
- Heng, X., et al. 2012. Nurr1 regulates Top II $\beta$  and functions in axon genesis of mesencephalic dopaminergic neurons. *Mol. Neurodegener.* 7: 4.

### RESEARCH USE

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



Try **Nurr1 (F-5): sc-376984** or **Nur77 (C-5): sc-365113**, our highly recommended monoclonal alternatives to Nurr1/Nur77 (E-20). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **Nurr1 (F-5): sc-376984**.