

# Nurr1 (N-20): sc-991

## 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> to 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; Nr4a2 (mouse) mapping to 2 C1.1.

## SOURCE

Nurr1 (N-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-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.

Blocking peptide available for competition studies, sc-991 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-991 X, 200 µg/0.1 ml.

## APPLICATIONS

Nurr1 (N-20) is recommended for detection of Nurr1 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

Suitable for use as control antibody for Nurr1 siRNA (h): sc-36111, Nurr1 siRNA (m): sc-36112, Nurr1 shRNA Plasmid (h): sc-36111-SH, Nurr1 shRNA Plasmid (m): sc-36112-SH, Nurr1 shRNA (h) Lentiviral Particles: sc-36111-V and Nurr1 shRNA (m) Lentiviral Particles: sc-36112-V.

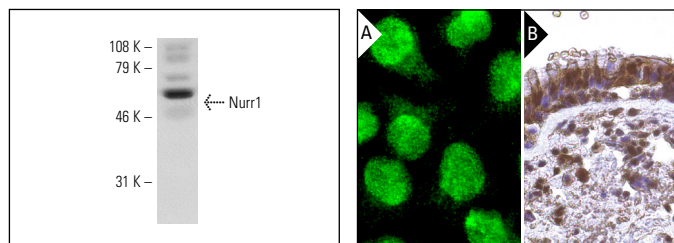
Nurr1 (N-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Positive Controls: 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 (N-20): sc-991. Western blot analysis of Nurr1 expression in SW-13 whole cell lysate.

Nurr1 (N-20): sc-991. 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

- McEvoy, A.N., et al. 2002. Activation of nuclear orphan receptor Nurr1 transcription by NFκB and cyclic adenosine 5'-monophosphate response element-binding protein in rheumatoid arthritis synovial tissue. *J. Immunol.* 168: 2979-2987.
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- Ojeda, V., et al. 2003. Rapid increase of Nurr1 expression in the substantia nigra after 6-hydroxydopamine lesion in the striatum of the rat. *J. Neurosci. Res.* 73: 686-697.
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- Roussa, E. and Kriegelstein, K. 2004. GDNF promotes neuronal differentiation and dopaminergic development of mouse mesencephalic neurospheres. *Neurosci. Lett.* 361: 52-55.
- Mix, K.S., et al. 2007. Transcriptional repression of matrix metalloproteinase gene expression by the orphan nuclear receptor Nurr1 in cartilage. *J. Biol. Chem.* 282: 9492-9504.
- Roussa, E., et al. 2008. Transforming growth factor β cooperates with persephin for dopaminergic phenotype induction. *Stem Cells* 26: 1683-1694.

## RESEARCH USE

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