

# Nurr1 (F-5): sc-376984

## 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.

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: NR4A2 (human) mapping to 2q24.1; Nr4a2 (mouse) mapping to 2 C1.1.

## SOURCE

Nurr1 (F-5) is a mouse monoclonal antibody raised against amino acids 66-262 of Nurr1 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain 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-376984 X, 200 µg/0.1 ml.

Nurr1 (F-5) is available conjugated to agarose (sc-376984 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376984 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376984 PE), fluorescein (sc-376984 FITC), Alexa Fluor® 488 (sc-376984 AF488), Alexa Fluor® 546 (sc-376984 AF546), Alexa Fluor® 594 (sc-376984 AF594) or Alexa Fluor® 647 (sc-376984 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376984 AF680) or Alexa Fluor® 790 (sc-376984 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## STORAGE

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

## APPLICATIONS

Nurr1 (F-5) is recommended for detection of Nurr1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

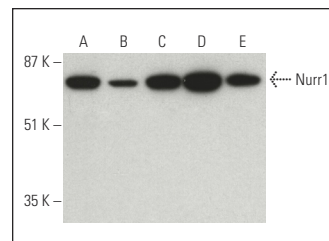
Suitable for use as control antibody for Nurr1 siRNA (h): sc-36111, Nurr1 siRNA (m2): sc-270257, Nurr1 siRNA (r): sc-270437, Nurr1 shRNA Plasmid (h): sc-36111-SH, Nurr1 shRNA Plasmid (m2): sc-270257-SH, Nurr1 shRNA Plasmid (r): sc-270437-SH, Nurr1 shRNA (h) Lentiviral Particles: sc-36111-V, Nurr1 shRNA (m2) Lentiviral Particles: sc-270257-V and Nurr1 shRNA (r) Lentiviral Particles: sc-270437-V.

Nurr1 (F-5) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

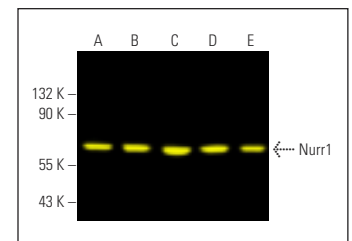
Molecular Weight of Nurr1: 66 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, SK-N-MC cell lysate: sc-2237 or HeLa whole cell lysate: sc-2200.

## DATA



Nurr1 (F-5) HRP: sc-376984 HRP. Direct western blot analysis of Nurr1 expression in A-431 (A), SK-N-MC (B), HeLa (C), Jurkat (D) and U-87 MG (E) whole cell lysates.



Nurr1 (F-5) Alexa Fluor® 488: sc-376984 AF488. Direct fluorescent western blot analysis of Nurr1 expression in A-431 (A), HeLa (B), Jurkat (C), U-87 MG (D) and SK-N-MC (E) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.

## SELECT PRODUCT CITATIONS

1. Jovanovic, V.M., et al. 2018. BMP/Smad pathway promotes neurogenesis of midbrain dopaminergic neurons *in vivo* and in human induced pluripotent and neural stem cells. *J. Neurosci.* 38: 1662-1676.
2. Renner, H., et al. 2020. A fully automated high-throughput workflow for 3D-based chemical screening in human midbrain organoids. *Elife* 9: e52904.
3. Zhang, D., et al. 2021. Targeting corticotroph HDAC and PI3-kinase in cushing disease. *J. Clin. Endocrinol. Metab.* 106: e232-e246.
4. Zhang, W., et al. 2022. Steroid nuclear receptor coactivator 2 controls immune tolerance by promoting induced Treg differentiation via up-regulating Nr4a2. *Sci. Adv.* 8: eabn7662.

## RESEARCH USE

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