SANTA CRUZ BIOTECHNOLOGY, INC.

Nurr1 (447C2a): sc-81345

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 G_0 to G_1 transition and throughout the G_1 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.

CHROMOSOMAL LOCATION

Genetic locus: NR4A2 (human) mapping to 2q24.1.

SOURCE

Nurr1 (447C2a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to a region near the N-terminus of Nurr1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

APPLICATIONS

Nurr1 (447C2a) is recommended for detection of Nurr1 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 Nurr1 siRNA (h): sc-36111, Nurr1 shRNA Plasmid (h): sc-36111-SH and Nurr1 shRNA (h) Lentiviral Particles: sc-36111-V.

Molecular Weight of Nurr1: 66 kDa.

Positive Controls: Nurr1 (h): 293T Lysate: sc-158785, SW-13 cell lysate: sc-24778 or SH-SY5Y nuclear extract: sc-364820.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

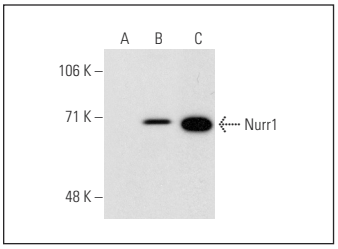
PROTOCOLS

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

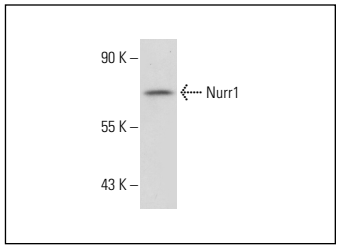
RESEARCH USE

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

DATA



Nurr1 (447C2a): sc-81345. Western blot analysis of Nurr1 expression in non-transfected: sc-117752 (**A**) and human Nurr1 transfected: sc-158785 (**B**) 293T whole cell lysates and SH-SY5Y nuclear extract (**C**).



Nurr1 (447C2a): sc-81345. Western blot analysis of Nurr1 expression in SW-13 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Arredondo, C., et al. 2013. PIASγ enhanced SUMO-2 modification of Nurr1 activation-function-1 domain limits Nurr1 transcriptional synergy. PLoS ONE 8: e55035.
2. Han, Y., et al. 2013. Expression of orphan nuclear receptor NR4A2 in gastric cancer cells confers chemoresistance and predicts an unfavorable postoperative survival of gastric cancer patients with chemotherapy. Cancer 119: 3436-3445.
3. Lappas, M. 2014. Effect of spontaneous term labour on the expression of the NR4A receptors nuclear receptor related 1 protein (Nurr1), neuron-derived clone 77 (Nur77) and neuron-derived orphan receptor 1 (NOR1) in human fetal membranes and myometrium. Reprod. Fertil. Dev. 28: 893-906.
4. Arredondo, C., et al. 2016. Opposite effects of acute and chronic amphetamine on Nurr1 and NFκB p65 in the rat ventral tegmental area. Brain Res. 1652: 14-20.
5. Zygogianni, O., et al. 2020. Engraftable induced pluripotent stem cell-derived neural precursors for brain repair. Methods Mol. Biol. 2155: 23-39.
6. Zhu, H. and Wu, J.Y. 2020. Induction of osteoblasts by direct reprogramming of mouse fibroblasts. Methods Mol. Biol. 2155: 201-212.
7. Teng, Y., et al. 2021. Conditional deficiency of m^6A methyltransferase Mettl14 in substantia nigra alters dopaminergic neuron function. J. Cell. Mol. Med. 25: 8567-8572.
8. Ye, F., et al. 2022. Recruitment of the CoREST transcription repressor complexes by Nerve Growth factor IB-like receptor (Nurr1/NR4A2) mediates silencing of HIV in microglial cells. PLoS Pathog. 18: e1010110.

PROTOCOLS

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