SANTA CRUZ BIOTECHNOLOGY, INC.

Nur77 (E-6): sc-166166

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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_0/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: Nr4a1 (mouse) mapping to 15 F2.

SOURCE

Nur77 (E-6) is a mouse monoclonal antibody raised against amino acids 59-269 of Nur77 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} 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-166166 X, 200 µg/0.1 ml.

Nur77 (E-6) is available conjugated to agarose (sc-166166 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166166 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166166 PE), fluorescein (sc-166166 FITC), Alexa Fluor® 488 (sc-166166 AF488), Alexa Fluor® 546 (sc-166166 AF546), Alexa Fluor® 594 (sc-166166 AF594) or Alexa Fluor® 647 (sc-166166 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166166 AF680) or Alexa Fluor® 790 (sc-166166 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Nur77 (E-6) is recommended for detection of Nur77 of mouse and rat 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 Nur77 siRNA (m): sc-36110, Nur77 siRNA (r): sc-108068, Nur77 shRNA Plasmid (m): sc-36110-SH, Nur77 shRNA Plasmid (r): sc-108068-SH, Nur77 shRNA (m) Lentiviral Particles: sc-36110-V and Nur77 shRNA (r) Lentiviral Particles: sc-108068-V.

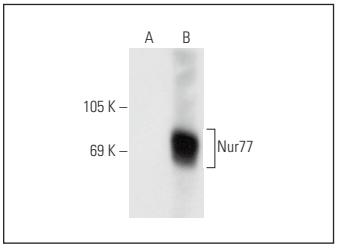
Nur77 (E-6) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Nur77: 64 kDa.

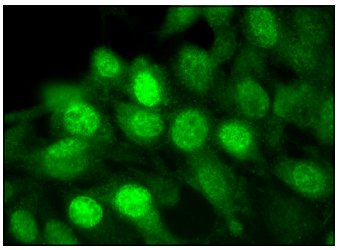
STORAGE

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

DATA



Nur77 (E-6): sc-166166. Western blot analysis of Nur77 expression in non-transfected: sc-117752 (**A**) and mouse Nur77 transfected: sc-122180 (**B**) 293T whole cell lysates.



Nur77 (E-6): sc-166166. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing nuclear and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Jiang, Y., et al. 2016. Nur77 attenuates endothelin-1 expression via down-regulation of NFκB and p38 MAPK in A549 cells and in an ARDS rat model. Am. J. Physiol. Lung Cell. Mol. Physiol. 311: L1023-L1035.
2. Jeanneteau, F., et al. 2018. The stress-induced transcription factor NR4A1 adjusts mitochondrial function and synapse number in prefrontal cortex. J. Neurosci. 38: 1335-1350.
3. Pan, X., et al. 2019. Nr4a1 as a myogenic factor is upregulated in satellite cells/myoblast under proliferation and differentiation state. Biochem. Biophys. Res. Commun. 513: 573-581.
4. Dromard, Y., et al. 2021. Dual imaging of dendritic spines and mitochondria *in vivo* reveals hotspots of plasticity and metabolic adaptation to stress. Neurobiol. Stress 15: 100402.
5. Luo, Q., et al. 2022. hUCMSCs reduce theca interstitial cells apoptosis and restore ovarian function in premature ovarian insufficiency rats through regulating NR4A1-mediated mitochondrial mechanisms. Reprod. Biol. Endocrinol. 20: 125.
6. Liu, P., et al. 2023. Noncanonical contribution of microglial transcription factor NR4A1 to post-stroke recovery through TNF mRNA destabilization. PLoS Biol. 21: e3002199.
7. Chen, J., et al. 2024. Progressive reduction of nuclear receptor Nr4a1 mediates age-dependent cognitive decline. Alzheimers Dement. 20: 3504-3524.
8. Huang, M., et al. 2024. Nr4a1 regulates cell-specific transcriptional programs in inhibitory GABAergic interneurons. Neuron 112: 2031-2044.e7.

RESEARCH USE

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