

# Neuro D2 (G-10): sc-365896

## BACKGROUND

Members of the myogenic determination family are basic helix-loop-helix (bHLH) proteins that can be separated into two classes, both of which work together to activate DNA transcription. Class A proteins include the ubiquitously expressed E-box binding factors, namely E2A, ITF-2 and HEB, while class B proteins, such as MyoD, myogenin and Neuro D ( $\beta$ 2), are transiently expressed and exhibit a much more limited tissue distribution. Working in opposition to these positively acting factors are a specialized group of basic helix-loop-helix (bHLH) transcription factors that function as dominant negative regulators and are involved in cell lineage determination and differentiation. Neuro D2 (neurogenic differentiation 2), also known as NDRF, NEUROD2 or bHLHa1, is a 382 amino acid nuclear protein that contains one bHLH domain and functions to induce neurogenic differentiation, playing an important role in the maintenance and determination of cell fate.

## REFERENCES

- McCormick, M.B., et al. 1996. Neuro D2 and Neuro D3: distinct expression patterns and transcriptional activation potentials within the neuroD gene family. *Mol. Cell. Biol.* 16: 5792-5800.
- Tamimi, R.M., et al. 1997. NEUROD2 and NEUROD3 genes map to human chromosomes 17q12 and 5q23-q31 and mouse chromosomes 11 and 13, respectively. *Genomics* 40: 355-357.
- Online Mendelian Inheritance in Man, OMIM™. 1997. Johns Hopkins University, Baltimore, MD. MIM Number: 601725. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: NEUROD2 (human) mapping to 17q12; Neurod2 (mouse) mapping to 11 D.

## SOURCE

Neuro D2 (G-10) is a mouse monoclonal antibody raised against amino acids 308-368 mapping at the C-terminus of Neuro D2 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</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-365896 X, 200  $\mu$ g/0.1 ml.

Neuro D2 (G-10) is available conjugated to agarose (sc-365896 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365896 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365896 PE), fluorescein (sc-365896 FITC), Alexa Fluor® 488 (sc-365896 AF488), Alexa Fluor® 546 (sc-365896 AF546), Alexa Fluor® 594 (sc-365896 AF594) or Alexa Fluor® 647 (sc-365896 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365896 AF680) or Alexa Fluor® 790 (sc-365896 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## RESEARCH USE

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

## APPLICATIONS

Neuro D2 (G-10) is recommended for detection of Neuro D2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

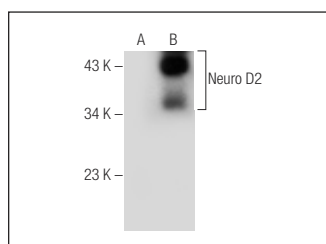
Suitable for use as control antibody for Neuro D2 siRNA (h): sc-94081, Neuro D2 siRNA (m): sc-149930, Neuro D2 shRNA Plasmid (h): sc-94081-SH, Neuro D2 shRNA Plasmid (m): sc-149930-SH, Neuro D2 shRNA (h) Lentiviral Particles: sc-94081-V and Neuro D2 shRNA (m) Lentiviral Particles: sc-149930-V.

Neuro D2 (G-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Neuro D2: 41 kDa.

Positive Controls: human Neuro D2 transfected HEK293T whole cell lysate.

## DATA



Neuro D2 (G-10): sc-365896. Western blot analysis of Neuro D2 expression in non transfected (A) and human Neuro D2 transfected (B) HEK293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Zeng, X.N., et al. 2012. AQP4 knockout aggravates ischemia/reperfusion injury in mice. *CNS Neurosci. Ther.* 18: 388-394.
- Shou, J.W., et al. 2019. Berberine protects C17.2 neural stem cells from oxidative damage followed by inducing neuronal differentiation. *Front. Cell. Neurosci.* 13: 395.
- Lin, L., et al. 2020. Developmental attenuation of neuronal apoptosis by neural-specific splicing of Bak1 microexon. *Neuron* 107: 1180-1196.e8.
- Safari, M.S., et al. 2021. PKN1 is a novel regulator of hippocampal GluA1 levels. *Front. Synaptic Neurosci.* 13: 640495.
- Chen, T., et al. 2023. NSUN2 is a glucose sensor suppressing cGAS/STING to maintain tumorigenesis and immunotherapy resistance. *Cell Metab.* 35: 1782-1798.e8.

## STORAGE

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