SANTA CRUZ BIOTECHNOLOGY, INC.

Nrl (F-2): sc-374277

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Nrl (neural retina leucine zipper) is a member of the Maf family of transcription factors, which characteristically contain a highly conserved basic leucine zipper (bZIP)-DNA binding motif. Both Nrl and c-Maf preferentially bind to T-MARE sites and are implicated in a wide variety of developmental and physiologic roles. The Maf-Nrl subfamily regulates the expression of cell type-specific genes in tissues of the hematopoietic system, cerebellum and developing hindbrain. Maf and Nrl proteins bind an extended AP-1-like sequence and can form heterodimers with Fos and Jun transcription factors. In retinal cells and photoreceptor cells, Nrl promotes the expression of rhodopsin through binding to the Nrl response element present in the rhodopsin promoter. Nrl is expressed throughout the developing central and peripheral nervous system during neuronal differentiation, and its expression is restricted to neocortex, brainstem and retinal neurons during adulthood.

CHROMOSOMAL LOCATION

Genetic locus: NRL (human) mapping to 14q11.2.

SOURCE

Nrl (F-2) is a mouse monoclonal antibody raised against amino acids 21-140 mapping within an internal region of Nrl of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 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-374277 X, 200 µg/0.1 ml.

Nrl (F-2) is available conjugated to agarose (sc-374277 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374277 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374277 PE), fluorescein (sc-374277 FITC), Alexa Fluor® 488 (sc-374277 AF488), Alexa Fluor® 546 (sc-374277 AF546), Alexa Fluor® 594 (sc-374277 AF594) or Alexa Fluor® 647 (sc-374277 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374277 AF680) or Alexa Fluor® 790 (sc-374277 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Nrl (F-2) is recommended for detection of Nrl of 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 Nrl siRNA (h): sc-38109, Nrl shRNA Plasmid (h): sc-38109-SH and Nrl shRNA (h) Lentiviral Particles: sc-38109-V.

Nrl (F-2) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of Nrl: 26 kDa.

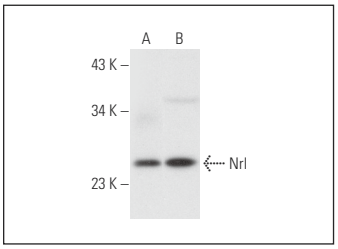
Molecular Weight (observed) of Nrl: 26/29-35 kDa.

Positive Controls: Nrl (h2): 293T Lysate: sc-113074, ARPE-19 whole cell lysate: sc-364357 or Y79 cell lysate: sc-2240.

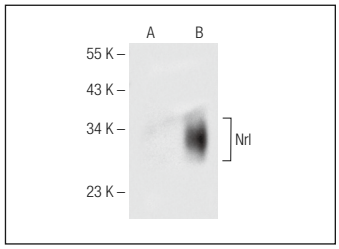
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Nrl (F-2): sc-374277. Western blot analysis of Nrl expression in Y79 (**A**) and ARPE-19 (**B**) whole cell lysates.



Nrl (F-2): sc-374277. Western blot analysis of Nrl expression in non-transfected: sc-117752 (**A**) and human Nrl transfected: sc-113074 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Buskin, A., et al. 2018. Disrupted alternative splicing for genes implicated in splicing and ciliogenesis causes PRPF31 retinitis pigmentosa. Nat. Commun. 9: 4234.
2. Chichagova, V., et al. 2019. Differentiation of retinal organoids from human pluripotent stem cells. Curr. Protoc. Stem Cell Biol. 50: e95.
3. Wang, X., et al. 2023. SOX2-positive retinal stem cells are identified in adult human pars plicata by single-cell transcriptomic analyses. MedComm 4: e198.
4. Li, R., et al. 2023. Integrative single-cell transcriptomics and epigenomics mapping of the fetal retina developmental dynamics. Adv. Sci. 10: e2206623.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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