SANTA CRUZ BIOTECHNOLOGY, INC.

Nrl (A-6): sc-398046

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.

REFERENCES

1. Swaroop, A., et al. 1992. A conserved retina-specific gene encodes a basic motif/leucine zipper domain. Proc. Natl. Acad. Sci. USA 89: 266-270.
2. Andrews, N.C., et al. 1993. The ubiquitous subunit of erythroid transcription factor NF-E2 is a small basic-leucine zipper protein related to the v-Maf oncogene. Proc. Natl. Acad. Sci. USA 90: 11488-11492.
3. Kerppola, T.K., et al. 1994. Maf and Nrl can bind to AP-1 sites and form heterodimers with Fos and Jun. Oncogene 9: 675-684.
4. Kerppola, T.K., et al. 1994. A conserved region adjacent to the basic domain is required for recognition of an extended DNA binding site by Maf/Nrl family proteins. Oncogene 9: 3149-3158.
5. Kurschner, C. and Morgan, J.I. 1995. The Maf proto-oncogene stimulates transcription from multiple sites in a promoter that directs Purkinje neuron-specific gene expression. Mol. Cell. Biol. 15: 246-254.

CHROMOSOMAL LOCATION

Genetic locus: NRL (human) mapping to 14q11.2; Nrl (mouse) mapping to 14 C3.

SOURCE

Nrl (A-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 42-69 within an internal region of Nrl of human origin.

PRODUCT

Each vial contains 200 µg IgG_3 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-398046 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-398046 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

Nrl (A-6) is recommended for detection of Nrl 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).

Nrl (A-6) is also recommended for detection of Nrl in additional species, including bovine.

Suitable for use as control antibody for Nrl siRNA (h): sc-38109, Nrl siRNA (m): sc-38110, Nrl shRNA Plasmid (h): sc-38109-SH, Nrl shRNA Plasmid (m): sc-38110-SH, Nrl shRNA (h) Lentiviral Particles: sc-38109-V and Nrl shRNA (m) Lentiviral Particles: sc-38110-V.

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

Molecular Weight (predicted) of Nrl: 26 kDa.

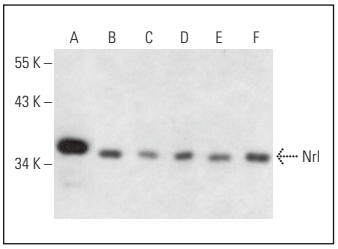
Molecular Weight (observed) of Nrl: 26/29-35 kDa.

Positive Controls: ARPE-19 whole cell lysate: sc-364357, Sol8 cell lysate: sc-2249 or Y79 cell lysate: sc-2240.

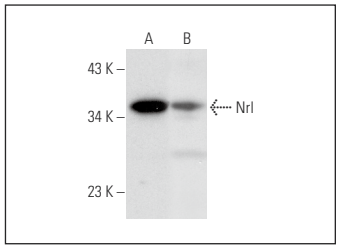
RECOMMENDED SUPPORT REAGENTS

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 (A-6): sc-398046. Western blot analysis of Nrl expression in Y79 (**A**), Hep G2 (**B**), C2C12 (**C**), Sol8 (**D**), RPE-J (**E**) and L8 (**F**) whole cell lysates.



Nrl (A-6): sc-398046. Western blot analysis of Nrl expression in Y79 (**A**) and ARPE-19 (**B**) whole cell lysates.

RESEARCH USE

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