

# NELF-A (H-240): sc-32911

## BACKGROUND

NELF-A, for negative elongation factor A, is a protein factor required for DRB-sensitive transcription. NELF-A is one of the five components of the multisubunit NELF complex that cooperates with DSIF to repress RNA polymerase II elongation. Control of transcription elongation requires a complex interplay between positive transcription elongation factor b (P-TEFb) and negative transcription elongation factors, DSIF and NELF. DSIF and NELF act as negative transcription elongation factors by increasing the time the polymerase spends at pause sites. DSIF/NELF inhibition of transcription is prevented by P-TEFb in cooperation with FACT. NELF-A is also known as WHSC2 (Wolf-Hirschhorn syndrome candidate 2). Wolf-Hirschhorn syndrome is a multiple malformation syndrome characterized by mental and developmental defects resulting from a hemizygous deletion of the distal short arm of chromosome 4 (4p16.3). The human NELF-A gene maps to chromosome 4p16.3 and encodes a 528 amino acid protein that is expressed in endothelial cells.

## REFERENCES

1. Yamaguchi, Y., et al. 1999. NELF, a multisubunit complex containing RD, cooperates with DSIF to repress RNA polymerase II elongation. *Cell* 97: 41-51.
2. Wright, T.J., et al. 1999. Comparative analysis of a novel gene from the Wolf-Hirschhorn/Pitt-Rogers-Danks syndrome critical region. *Genomics* 59: 203-212.
3. Wada, T., et al. 2000. FACT relieves DSIF/NELF-mediated inhibition of transcriptional elongation and reveals functional differences between P-TEFb and TFIIH. *Mol. Cell* 5: 1067-1072.
4. Mariotti, M., et al. 2000. Modulation of WHSC2 expression in human endothelial cells. *FEBS Lett.* 487: 166-170.

## CHROMOSOMAL LOCATION

Genetic locus: WHSC2 (human) mapping to 4p16.3; Whsc2 (mouse) mapping to 5 B2.

## SOURCE

NELF-A (H-240) is a rabbit polyclonal antibody raised against amino acids 92-300 mapping near the N-terminus of NELF-A of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## 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.

## APPLICATIONS

NELF-A (H-240) is recommended for detection of NELF-A isoforms 1 and 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

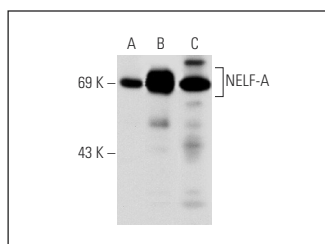
NELF-A (H-240) is also recommended for detection of NELF-A isoforms 1 and 2 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for NELF-A siRNA (h): sc-38095, NELF-A siRNA (m): sc-38096, NELF-A shRNA Plasmid (h): sc-38095-SH, NELF-A shRNA Plasmid (m): sc-38096-SH, NELF-A shRNA (h) Lentiviral Particles: sc-38095-V and NELF-A shRNA (m) Lentiviral Particles: sc-38096-V.

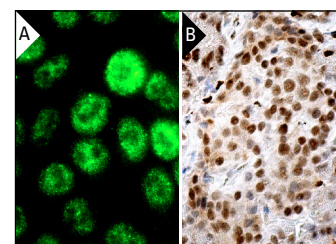
Molecular Weight of NELF-A: 66 kDa.

Positive Controls: NELF-A (h): 293T Lysate: sc-177614, NELF-A (m): 293T Lysate: sc-122003 or DU 145 cell lysate: sc-2268.

## DATA



NELF-A (H-240): sc-32911. Western blot analysis of NELF-A expression in non-transfected: sc-117752 (A) and human NELF-A transfected: sc-177614 (B) 293T whole cell lysates and DU 145 nuclear extract (C).



NELF-A (H-240): sc-32911. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing nuclear staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

1. Niu, Y., et al. 2009. Identification of peptides applicable as vaccines for HLA-A26-positive cancer patients. *Cancer Sci.* 100: 2167-2174.
2. Qi, T., et al. 2011. G-actin participates in RNA polymerase II-dependent transcription elongation by recruiting positive transcription elongation factor b (P-TEFb). *J. Biol. Chem.* 286: 15171-15181.

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Try **NELF-A (G-11): sc-365004** or **NELF-A (A-10): sc-271960**, our highly recommended monoclonal alternatives to NELF-A (H-240).