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- Expressversand

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# NELF-A (h): 293T Lysate: sc-177614

## 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  $\beta$  (P-TEF $\beta$ ) 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.
5. Ping, Y.H., et al. 2001. DSIF and NELF interact with RNA polymerase II elongation complex and HIV-1 Tat stimulates P-TEFb-mediated phosphorylation of RNA polymerase II and DSIF during transcription elongation. *J. Biol. Chem.* 276: 12951-12958.

## CHROMOSOMAL LOCATION

Genetic locus: WHSC2 (human) mapping to 4p16.3.

## PRODUCT

NELF-A (h): 293T Lysate represents a lysate of human NELF-A transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## APPLICATIONS

NELF-A (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive NELF-A antibodies. Recommended use: 10-20  $\mu$ l per lane.

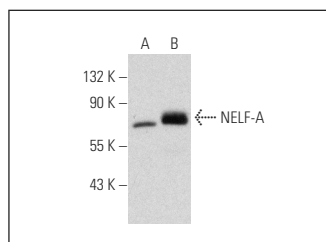
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

NELF-A (A-10): sc-271960 is recommended as a positive control antibody for Western Blot analysis of enhanced human NELF-A expression in NELF-A transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:  
1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## DATA



NELF-A (A-10): sc-271960. 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.

## STORAGE

Store at -20 $^{\circ}$  C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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](http://www.scbt.com) for detailed protocols and support products.