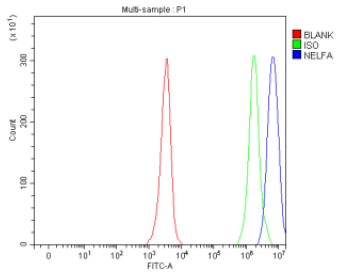
NELFA Antibody / Negative elongation factor A (FY12827)

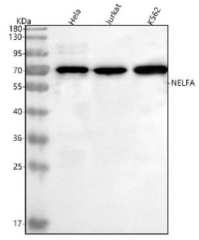
Catalog No.	Formulation	Size
FY12827	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9H3P2
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This NELFA antibody is available for research use only.



Flow Cytometry analysis of human JK cells using anti-NELFA antibody. Overlay histogram showing JK cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-NELFA antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



Western blot analysis of NELFA using anti-NELFA antibody. Lane 1: human Hela whole cell lysates, Lane 2: human Jurkat whole cell lysates, Lane 3: human K562 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-NELFA antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. NELFA western blot across human cell lines shows a predominant band at ~70 kDa, consistent with full-length NELFA running above its predicted ~59-60 kDa due to phosphorylation and anomalous migration.

Description

NELFA antibody detects Negative elongation factor A, a transcriptional regulator that controls RNA polymerase II pausing and transcription elongation. Encoded by the NELFA gene on chromosome 9q34.11, this protein is a core component of the negative elongation factor (NELF) complex, which also includes NELFB, NELFC/D, and NELFE subunits. Together, these proteins transiently inhibit RNA polymerase II progression downstream of transcription start sites, enabling proper promoter-proximal pausing, RNA capping, and regulated gene expression.

NELFA interacts with DSIF (DRB sensitivity-inducing factor) and phosphorylated RNA polymerase II to modulate transcriptional timing and elongation efficiency. Release from pausing is mediated by P-TEFb-dependent phosphorylation events that allow productive elongation. Through these mechanisms, NELFA coordinates transcriptional responses to developmental, environmental, and signaling cues.

The NELFA antibody is widely used in transcription, chromatin, and epigenetic regulation research to study RNA polymerase II pausing, elongation control, and transcriptional activation. Western blot analysis identifies a 66 kilodalton band corresponding to NELFA, while immunofluorescence reveals nuclear punctate staining associated with active transcription foci. This antibody supports studies investigating transcriptional regulation and pause-release mechanisms.

Altered NELFA activity affects global gene expression programs, contributing to developmental disorders, cancer, and viral replication control. NELFA has also been linked to stress responses, where it modulates transcription restart following DNA damage or heat shock. The NELFA antibody provides a critical reagent for dissecting the molecular mechanisms of transcription elongation and RNA polymerase II regulation. NSJ Bioreagents offers this antibody validated for its applications, ensuring dependable performance in transcriptional research.

Application Notes

Optimal dilution of the NELFA antibody should be determined by the researcher.

Immunogen

E.coli-derived human NELFA recombinant protein (Position: I38-L482) was used as the immunogen for the NELFA antibody.

Storage

After reconstitution, the NELFA antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.