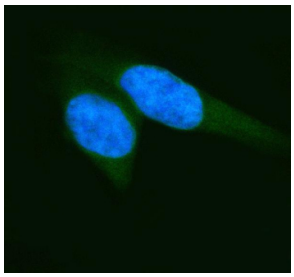
ELP2 Antibody / Elongator complex protein 2 (FY12102)

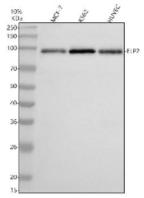
Catalog No.	Formulation	Size
FY12102	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

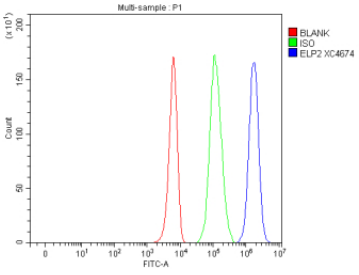
Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q6IA86
Applications	Western Blot : 0.25-0.5ug/ml Immunocytochemistry/Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This ELP2 antibody is available for research use only.



IF analysis of ELP2 using anti-ELP2 antibody (green). ELP2 was detected in an immunocytochemical section of Hela cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-ELP2 antibody overnight at 4oC. DyLight 488 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. The section was counterstained with DAPI (blue). Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Western blot analysis of ELP2 using anti-ELP2 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human MCF-7 whole cell lysates, Lane 2: human K562 whole cell lysates, Lane 3: human HUVEC 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-ELP2 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 an ECL Plus Western Blotting Substrate. A specific band was detected for ELP2 at approximately 93 kDa. The expected band size for ELP2 is at 93 kDa.



Flow Cytometry analysis of K562 cells using anti-ELP2 antibody. Overlay histogram showing K562 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-ELP2 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 without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

Description

ELP2 antibody detects Elongator complex protein 2, encoded by the ELP2 gene. Elongator complex protein 2 is a subunit of the six-protein Elongator complex, which functions in transcriptional elongation, tRNA modification, and cytoskeletal regulation. ELP2 antibody provides researchers with a reagent for studying transcriptional control, RNA modification, and neuronal development.

The Elongator complex associates with RNA polymerase II and facilitates transcriptional elongation by modifying chromatin and RNA. Research using ELP2 antibody has shown that Elongator promotes efficient transcription of genes involved in development and stress responses. It also plays an important role in acetylation of histones, linking transcription to chromatin structure.

Studies with ELP2 antibody have revealed that Elongator regulates wobble base modifications in tRNA, ensuring accurate translation and proteome stability. Loss of ELP2 disrupts codon decoding and protein synthesis, impairing cellular growth and differentiation. These functions underscore its significance beyond transcriptional control.

Dysregulation of Elongator complex protein 2 has been associated with neurodevelopmental and neurological disorders. Research using ELP2 antibody has shown that variants in Elongator subunits contribute to familial dysautonomia and intellectual disability syndromes. In neuronal systems, ELP2 influences migration, axonal outgrowth, and synaptic development, highlighting its role in brain function.

Beyond neurology, Elongator impacts immune responses and tumor biology. Research using ELP2 antibody has indicated that altered expression affects stress-induced gene expression, cell migration, and invasion in cancer. These findings expand its biological scope.

ELP2 antibody is widely applied in western blotting, immunohistochemistry, and RNA-protein interaction studies. Western blotting quantifies protein levels in tissues, immunohistochemistry demonstrates localization, and interaction studies identify Elongator-associated RNAs and proteins. These applications make ELP2 antibody indispensable for research in transcriptional and translational regulation.

By providing validated ELP2 antibody reagents, NSJ Bioreagents supports studies into transcriptional elongation, tRNA

modification, and neurodevelopment. Detection of Elongator complex protein 2 provides researchers with insight into how transcriptional cofactors regulate gene expression and disease.

Application Notes

Optimal dilution of the ELP2 antibody should be determined by the researcher.

Immunogen

E.coli-derived human ELP2 recombinant protein (Position: D84-L826) was used as the immunogen for the ELP2 antibody.

Storage

After reconstitution, the ELP2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.