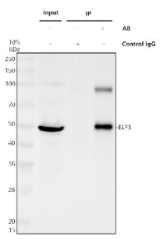
ELF3 Antibody / E74-like factor 3 (FY12381)

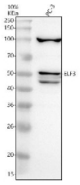
Catalog No.	Formulation	Size
FY12381	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

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	P78545
Applications	Western Blot: 0.25-0.5ug/ml Immunoprecipitation: 2-4ug/500ug of lysate ELISA: 0.1-0.5ug/ml
Limitations	This ELF3 antibody is available for research use only.



Immunoprecipitation of ELF3 in whole cell lysate. Western blot analysis of ELF3 using anti-ELF3 antibody. Lane 1: whole cell lysates (30ug), Lane 2: Rabbit control IgG instead of anti-ELF3 antibody in whole cell lysate, Lane 3: anti-ELF3 antibody (2ug) + whole cell lysate (500ug). After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-ELF3 antibody at a dilution of 0.5 ug/ml and probed with a goat anti-rabbit IgG-HRP secondary antibody. The signal is developed using ECL Plus Western Blotting Substrate. ELF3 (~41 kDa predicted) was detected as bands at ~50 kDa, and ~100 kDa. The ~50 kDa form corresponds to phosphorylated/SUMO-modified ELF3, while the ~100 kDa species likely represents a dimeric or complex-associated form, consistent with published reports.



Western blot analysis of ELF3 using anti-ELF3 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human PC-3 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-ELF3 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. ELF3 (~41 kDa predicted) was detected as bands at ~42 kDa, ~50 kDa, and ~100 kDa. The ~50 kDa form corresponds to phosphorylated/SUMO-modified ELF3, while the ~100 kDa species likely represents a dimeric or complex-associated form, consistent with published reports.

Description

The ELF3 antibody targets E74-like factor 3, a transcription factor encoded by the ELF3 gene that belongs to the ETS (E26 transformation-specific) family of DNA-binding proteins. E74-like factor 3 acts as an epithelial cell-specific transcriptional activator regulating genes involved in differentiation, barrier formation, and immune response. It binds ETS consensus sequences in gene promoters to modulate expression of epithelial keratins, claudins, and cytokines. The ELF3 antibody provides researchers with a powerful tool for exploring epithelial gene regulation, development, and cancer biology.

E74-like factor 3 contains a highly conserved ETS DNA-binding domain and transcriptional activation region that interact with coactivators such as CBP/p300. It is predominantly expressed in epithelial tissues including the gastrointestinal tract, lung, and mammary gland. The ELF3 antibody enables visualization of nuclear expression patterns in these tissues and supports mechanistic studies of epithelial-specific gene networks. In normal physiology, ELF3 regulates differentiation of epithelial cells by coordinating transcription of structural and signaling molecules necessary for tissue integrity.

Aberrant expression of ELF3 has been linked to carcinogenesis, especially in colorectal, breast, and bladder cancers. It may function as either a tumor suppressor or oncogene depending on context, influencing cell proliferation, invasion, and response to inflammatory cytokines. The ELF3 antibody allows quantitative and localization-based studies of this transcription factor in tumor samples, contributing to identification of prognostic markers and molecular subtypes. It also facilitates exploration of ELF3's interaction with beta-catenin and NF-?B pathways, which connect epithelial transcription programs to inflammation and cancer progression.

In immune regulation, E74-like factor 3 drives transcription of chemokines and adhesion molecules that coordinate epithelial immune responses to pathogens and injury. The ELF3 antibody supports studies into these processes, revealing how epithelial tissues integrate immune and barrier functions. Furthermore, ELF3 participates in developmental processes such as endoderm differentiation and organ morphogenesis by directing epithelial lineage specification. Its dysregulation in early development may contribute to congenital anomalies and tissue remodeling defects.

NSJ Bioreagents provides the ELF3 antibody as a validated reagent for western blotting, immunofluorescence, and immunohistochemistry. It produces strong nuclear staining consistent with ELF3's transcriptional role. By enabling accurate detection of E74-like factor 3, this antibody supports comprehensive research into epithelial differentiation, inflammation, and tumorigenesis. The ELF3 antibody remains an essential reagent for understanding transcriptional control in epithelial biology and disease.

Application Notes

Optimal dilution of the ELF3 antibody should be determined by the researcher.

Immunogen

E.coli-derived human ELF3 recombinant protein (Position: Q48-L314) was used as the immunogen for the ELF3 antibody.

Storage

After reconstitution, the ELF3 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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