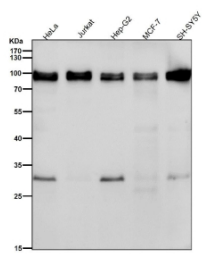
UBTF Antibody / UBF1 / Upstream binding factor 1 [clone 32U20] (FY13331)

Catalog No.	Formulation	Size
FY13331	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

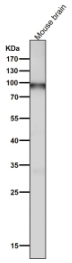
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Human, Mouse, Rat
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	32U20
Purity	Affinity chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	P17480
Applications	Western blot: 1:500-1:2000 Immunohistochemistry: 1:50-1:200
Limitations	This UBTF antibody is available for research use only.



Western blot testing of human samples using the UBTF antibody at 1:1000 dilution for 1 hour at room temperature. A predominant band is detected at an approximately 89 kDa in all samples, consistent with full length UBTF. Lysates also show a weaker band near 30 kDa, which likely represents a proteolytic fragment of UBTF that retains the antibody epitope rather than a distinct isoform.



Western blot testing of mouse brain tissue lysate using the UBTF antibody at 1:1000 dilution for 1 hour at room temperature. Predicted molecular weight ~89 kDa.

Description

UBTF antibody detects Upstream binding factor 1, encoded by the UBTF gene. Upstream binding factor 1 is a nucleolar transcription factor essential for ribosomal RNA synthesis and ribosome biogenesis. UBTF antibody provides researchers with a highly specific reagent for investigating transcriptional regulation, nucleolar organization, and diseases associated with altered ribosome production.

Upstream binding factor 1 binds ribosomal DNA promoter sequences and induces conformational changes that promote recruitment of RNA polymerase I and associated factors. Research using UBTF antibody has shown that the protein cooperates with selectivity factor 1 and other nucleolar proteins to form the transcription initiation complex. By bending ribosomal DNA and stabilizing transcription machinery, Upstream binding factor 1 ensures efficient expression of ribosomal RNA, a prerequisite for ribosome assembly and cellular protein synthesis.

Studies with UBTF antibody have demonstrated that the protein is subject to regulation by post-translational modifications. Phosphorylation by kinases such as ERK and mTOR influences DNA binding activity and transcriptional output. This regulation allows cells to couple ribosome biogenesis with growth signals, ensuring that protein production capacity matches proliferative demands. Such control is critical during development, stress adaptation, and oncogenic transformation.

In addition to transcriptional regulation, Upstream binding factor 1 contributes to nucleolar structure. Research using UBTF antibody has revealed that UBTF localizes to transcriptionally active nucleolar regions, forming foci that align with ribosomal DNA arrays. Loss of UBTF disrupts nucleolar organization, reduces ribosomal RNA transcription, and impairs ribosome assembly. These structural roles highlight UBTF as both a functional transcription factor and a nucleolar architectural protein.

Dysregulation of UBTF has been implicated in cancer and neurodegenerative disease. Studies with UBTF antibody have shown that elevated UBTF activity supports increased ribosome biogenesis in tumors, fueling uncontrolled cell proliferation. Overexpression correlates with poor prognosis in certain cancers, making UBTF a potential diagnostic marker and therapeutic target. Conversely, mutations in UBTF have been associated with pediatric neurodevelopmental syndromes and neurodegeneration, linking impaired ribosome production to neuronal dysfunction. These findings underscore the dual importance of UBTF in health and disease.

Upstream binding factor 1 also interacts with chromatin remodeling factors. Research using UBTF antibody has demonstrated that UBTF recruits or cooperates with histone modifiers to establish transcriptionally competent rDNA chromatin. Through these interactions, UBTF integrates epigenetic cues with transcriptional output, providing a mechanism for long-term regulation of ribosome synthesis in response to environmental signals.

UBTF antibody is widely applied in chromatin immunoprecipitation, immunofluorescence, and western blotting. Chromatin immunoprecipitation identifies UBTF binding across ribosomal DNA repeats, immunofluorescence demonstrates nucleolar localization, and western blotting confirms expression levels and post-translational modifications. These experimental applications make UBTF antibody indispensable for studying transcriptional control of ribosome biogenesis.

By supplying validated UBTF antibody reagents, NSJ Bioreagents supports studies into nucleolar function, transcription

regulation, and pathology. Detection of Upstream binding factor 1 provides researchers with precise insight into ribosomal RNA transcription and its role in cellular growth and disease.

Application Notes

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

Immunogen

A synthesized peptide derived from human UBF1 was used as the immunogen for the UBTF antibody.

Storage

Store the UBTF antibody at -20oC.

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