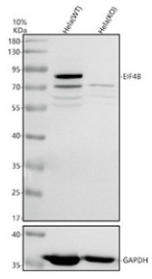
EIF4B Antibody / Eukaryotic Translation Initiation Factor 4B Antibody (FY13680)

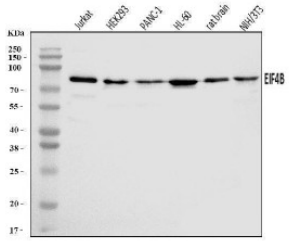
Catalog No.	Formulation	Size
FY13680	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

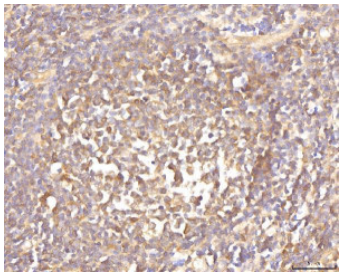
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	P23588
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5 ug/ml
Limitations	This EIF4B Antibody / Eukaryotic Translation Initiation Factor 4B Antibody is supplied exclusively for research use.



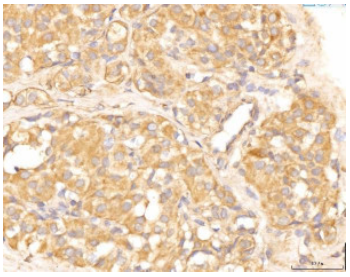
EIF4B Antibody WB Analysis of HeLa Wild-Type and Knockout Cells. Western blot analysis of human HeLa wild-type (WT, lane 1) and EIF4B knockout (KO, lane 2) whole-cell lysates using Eukaryotic Translation Initiation Factor 4B Antibody. A prominent band near 80 kDa is detected in WT lysate and is absent in KO lysate, supporting antibody specificity for EIF4B.



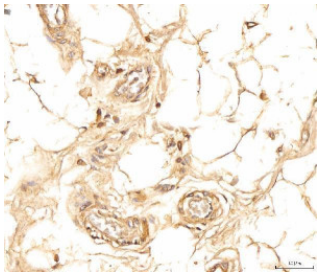
EIF4B Antibody WB Analysis of Jurkat, HEK293, PANC-1, HL-60, Rat Brain and NIH/3T3 Lysates. Western blot analysis of human Jurkat, HEK293, PANC-1 and HL-60 cell lysates, rat brain lysate, and mouse NIH/3T3 cell lysate using Eukaryotic Translation Initiation Factor 4B Antibody. A prominent band is detected near 80 kDa in all six samples, consistent with the reported electrophoretic migration of EIF4B despite its calculated molecular weight of approximately 69 kDa.



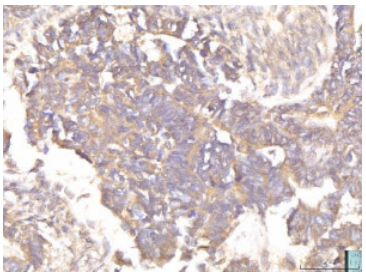
EIF4B Antibody IHC Staining of Human Tonsil Tissue. Immunohistochemical analysis of FFPE human tonsil tissue using Eukaryotic Translation Initiation Factor 4B Antibody. Brown DAB staining is observed in numerous cells within the lymphoid tissue, predominantly in the cytoplasm, with blue hematoxylin nuclear counterstaining.



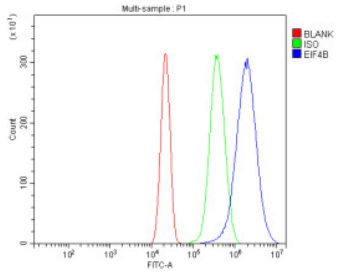
EIF4B Antibody IHC Staining of Human Thyroid Papillary Carcinoma Tissue. Immunohistochemical analysis of FFPE human thyroid papillary carcinoma tissue using Eukaryotic Translation Initiation Factor 4B Antibody. Brown DAB staining is observed throughout the cytoplasm of carcinoma cells, with blue hematoxylin nuclear counterstaining. The staining is predominantly cytoplasmic, consistent with the involvement of EIF4B in protein translation.



EIF4B Antibody IHC Staining of Human Colorectal Cancer Tissue. Immunohistochemical analysis of FFPE human colorectal cancer tissue using Eukaryotic Translation Initiation Factor 4B Antibody. Brown DAB staining is visible in the cytoplasm of malignant epithelial cells forming glandular structures, with blue hematoxylin counterstaining identifying cell nuclei.



EIF4B Antibody IHC Staining of Human Cervical Cancer Tissue. Immunohistochemical analysis of FFPE human cervical cancer tissue using Eukaryotic Translation Initiation Factor 4B Antibody. Brown DAB staining is observed predominantly in the cytoplasm of tumor cells, with blue hematoxylin nuclear counterstaining. The staining distribution is consistent with the cytoplasmic localization of EIF4B as a translation initiation factor.



EIF4B Antibody Flow Cytometry Analysis of Human U-2 OS Cells. Flow cytometry analysis of fixed and permeabilized human U-2 OS cells using Eukaryotic Translation Initiation Factor 4B Antibody at 1 ug per million cells. The blue histogram represents EIF4B antibody staining, the green histogram represents the rabbit IgG isotype control, and the red histogram represents unstained cells. A distinct rightward fluorescence shift is observed in the antibody-stained population relative to both controls, supporting intracellular EIF4B detection.

Description

EIF4B Antibody / Eukaryotic Translation Initiation Factor 4B Antibody targets eukaryotic translation initiation factor 4B (eIF4B), an RNA-binding protein that facilitates the initiation of protein synthesis. EIF4B functions as an accessory factor within the translation initiation machinery, promoting efficient recruitment and scanning of ribosomes along messenger RNA (mRNA). Its activity is particularly important for translation of transcripts containing structured 5' untranslated regions, which can impede ribosomal scanning and require additional RNA remodeling.

EIF4B cooperates with eukaryotic initiation factor 4A (eIF4A), an ATP-dependent RNA helicase that participates in

unwinding secondary structures within mRNA. Through its RNA-binding domains and interactions with initiation factors, EIF4B enhances eIF4A helicase activity and supports the assembly of translation initiation complexes. This cooperation helps the 43S preinitiation complex scan toward the translation start codon and contributes to the regulation of protein synthesis in response to cellular conditions.

EIF4B activity is regulated through phosphorylation by signaling pathways associated with cellular growth and nutrient availability. The mTORC1 pathway influences EIF4B phosphorylation through downstream kinases, including ribosomal protein S6 kinase (S6K). Phosphorylation at Ser422 has been associated with increased translation initiation activity, while additional regulatory sites, including Ser406, participate in controlling EIF4B function. These phosphorylation events help coordinate protein synthesis with extracellular growth signals, cellular energy status, and metabolic demands.

Beyond its general role in translation initiation, EIF4B contributes to selective translation of mRNAs involved in cell proliferation, survival, and stress responses. Altered EIF4B expression or phosphorylation has been investigated in cancer biology, where dysregulated translation initiation can promote production of proteins supporting malignant growth. EIF4B also participates in cellular responses to changes in nutrient availability and signaling activity, linking translational control to broader mechanisms of cellular adaptation.

EIF4B Antibody supports investigations into the regulation of translation initiation and the signaling pathways that influence protein synthesis. Understanding EIF4B expression and activity provides insight into how cells coordinate ribosomal recruitment, mRNA translation, and growth-associated protein production.

Explore related research targets in our Cell Biology Antibodies collection.

Application Notes

Users should optimize the working dilution of the EIF4B Antibody / Eukaryotic Translation Initiation Factor 4B Antibody for their specific experimental setup.

Immunogen

The EIF4B Antibody was generated using e. coli-derived human Eukaryotic Translation Initiation Factor 4B recombinant protein (amino acids M1-E611).

Storage

Once reconstituted, refrigerate the EIF4B Antibody at 4oC for no longer than one month. For extended storage, freeze aliquots at -20oC for up to six months and avoid repeated freeze-thaw cycles.

Alternate Names

Eukaryotic translation initiation factor 4B antibody, Eukaryotic initiation factor 4B antibody, Translation initiation factor eIF4B antibody, eIF-4B antibody, eIF4B antibody, EIF4B antibody

Copyright © NSJ Bioreagents. All rights reserved.