

eIF3B Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP55618

Product Information

Application	IHC-P, IHC-F, IF, ICC, E
Primary Accession	P55884
Reactivity	Rat, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	92482
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human eIF3B
Epitope Specificity	701-814/814
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasm.
SIMILARITY	Belongs to the eIF-3 subunit B family. Contains 1 RRM (RNA recognition motif) domain. Contains 5 WD repeats.
SUBUNIT	Component of the eukaryotic translation initiation factor 3 (eIF-3) complex, which is composed of 13 subunits: EIF3A, EIF3B, EIF3C, EIF3D, EIF3E, EIF3F, EIF3G, EIF3H, EIF3I, EIF3J, EIF3K, EIF3L and EIF3M. The eIF-3 complex appears to include 3 stable modules: module A is composed of EIF3A, EIF3B, EIF3G and EIF3I; module B is composed of EIF3F, EIF3H, and EIF3M; and module C is composed of EIF3C, EIF3D, EIF3E, EIF3K and EIF3L. EIF3C of module C binds EIF3B of module A and EIF3H of module B, thereby linking the three modules. EIF3J is a labile subunit that binds to the eIF-3 complex via EIF3B. The eIF-3 complex interacts with RPS6KB1 under conditions of nutrient depletion. Mitogenic stimulation leads to binding and activation of a complex composed of MTOR and RPTOR, leading to phosphorylation and release of RPS6KB1 and binding of EIF4B to eIF-3. Also interacts with UPF2.
Post-translational modifications	Phosphorylated. Phosphorylation is enhanced upon serum stimulation.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	eIF3b expression relates to human bladder and prostate cancer prognosis, is required for tumor growth, and thus a candidate therapeutic target. The initiation of protein synthesis in eukaryotic cells is regulated by interactions between protein initiation factors and RNA molecules. Association of eIF3 proteins with the 40S ribosomal subunit stabilizes eIF2-GTP-Met-tRNAiMet complex association and mRNA binding, and promotes dissociation of 80S ribosomes into 40S and 60S subunits, thereby promoting the assembly of the pre-initiation complex. Overexpression of eIF3 proteins is common in several cancers, suggesting a role for eIF3 proteins in tumorigenesis.

Additional Information

Gene ID	8662
Other Names	Eukaryotic translation initiation factor 3 subunit B {ECO:0000255 HAMAP-Rule:MF_03001}, eIF3b {ECO:0000255 HAMAP-Rule:MF_03001}, Eukaryotic translation initiation factor 3 subunit 9 {ECO:0000255 HAMAP-Rule:MF_03001}, Prt1 homolog, hPrt1, eIF-3-eta {ECO:0000255 HAMAP-Rule:MF_03001}, eIF3 p110 {ECO:0000255 HAMAP-Rule:MF_03001}, eIF3 p116, EIF3B {ECO:0000255 HAMAP-Rule:MF_03001}
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glycerol
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	EIF3B {ECO:0000255 HAMAP-Rule:MF_03001}
Function	RNA-binding component of the eukaryotic translation initiation factor 3 (eIF-3) complex, which is required for several steps in the initiation of protein synthesis (PubMed: 17581632 , PubMed: 25849773 , PubMed: 27462815 , PubMed: 9388245). The eIF-3 complex associates with the 40S ribosome and facilitates the recruitment of eIF-1, eIF-1A, eIF-2:GTP:methionyl-tRNA ⁱ and eIF-5 to form the 43S pre- initiation complex (43S PIC). The eIF-3 complex stimulates mRNA recruitment to the 43S PIC and scanning of the mRNA for AUG recognition. The eIF-3 complex is also required for disassembly and recycling of post-termination ribosomal complexes and subsequently prevents premature joining of the 40S and 60S ribosomal subunits prior to initiation (PubMed: 17581632 , PubMed: 9388245). The eIF-3 complex specifically targets and initiates translation of a subset of mRNAs involved in cell proliferation, including cell cycling, differentiation and apoptosis, and uses different modes of RNA stem-loop binding to exert either translational activation or repression (PubMed: 25849773).
Cellular Location	Cytoplasm {ECO:0000255 HAMAP-Rule:MF_03001}. Cytoplasm, Stress granule. Note=Localizes to stress granules following cellular stress

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.