

EIF4E2 Rabbit pAb

Catalog # AP99288

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	O60573
Other Accession	O60573
Reactivity	Mouse
Predicted	Rat, Pig, Human, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	28362
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human EIF4EL3
Epitope Specificity	21-120/245
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the eukaryotic initiation factor 4E family.
Post-translational modifications	Ubiquitinated by ARIH1, leading to its degradation by the proteasome.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The initiation of protein synthesis in eukaryotic cells is regulated by interactions between protein initiation factors and RNA molecules. The eukaryotic initiation factor 4E family (eIF4E) is comprised of three proteins that are involved in the early initiation of protein synthesis. eIF4E2 (eukaryotic translation initiation factor 4E family member 2), also known as 4EHP, IF4e, 4E-LP or EIF4EL3, is a ubiquitously expressed 245 amino acid protein. During early translation events, eIF4E2 recognizes and binds the 7-methylguanosine-containing mRNA cap (a cotranscriptionally added structure that conveys mRNA stability and allows for efficient RNA processing), thus initiating the unwinding of mRNA secondary structures and facilitating mRNA-ribosome binding. eIF4E2 competes with eIF4E (member 1) for cap binding and, upon modification by the ubiquitin-like protein ISG15 (Interferon-induced 15 kDa protein), exhibits increased mRNA cap affinity.

Additional Information

Gene ID	9470
Other Names	IF4E2_HUMAN; EIF4E2; eIF-4E type 2; eIF4E type 2; Eukaryotic translation initiation factor 4E homologous protein; Eukaryotic translation initiation factor 4E-like 3; eIF4E-like protein 4E-LP; mRNA cap-binding protein 4EHP (h4EHP); mRNA cap-binding protein type 3; EIF4EL3; eukaryotic translation initiation factor 4E family member 2

Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
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	EIF4E2 {ECO:0000303 PubMed:15153109, ECO:0000312 HGNC:HGNC:3293}
Function	Recognizes and binds the 7-methylguanosine-containing mRNA cap during an early step in the initiation. Acts as a repressor of translation initiation (PubMed: 17368478 , PubMed: 22751931 , PubMed: 25624349 , PubMed: 33581076 , PubMed: 9582349). In contrast to EIF4E, it is unable to bind eIF4G (EIF4G1, EIF4G2 or EIF4G3), suggesting that it acts by competing with EIF4E and block assembly of eIF4F at the cap (By similarity). In P-bodies, component of a complex that promotes miRNA-mediated translational repression (PubMed: 28487484). Involved in virus-induced host response by mediating miRNA MIR34A-induced translational silencing which controls IFNB1 production by a negative feedback mechanism (PubMed: 28487484 , PubMed: 33581076).
Cellular Location	Cytoplasm. Cytoplasm, P-body

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