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EIF5A Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1983a

Product Information

Application	WB, IHC, FC, ICC, E
Primary Accession	P63241
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	4E10G8
Isotype	IgG1
Calculated MW	16832
Description	EIF5A (eukaryotic translation initiation factor 5A) is a protein-coding gene. Diseases associated with EIF5A include lung adenocarcinoma, and intrahepatic cholangiocarcinoma, and among its related super-pathways are Post-translational protein modification and Apoptotic Pathways in Synovial Fibroblasts. GO annotations related to this gene include ribosome binding and RNA binding. An important paralog of this gene is EIF5AL1.
Immunogen	Purified recombinant fragment of human EIF5A (AA: full(1-154)) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide.

Additional Information

Gene ID	1984
Other Names	Eukaryotic translation initiation factor 5A-1, eIF-5A-1, eIF-5A1, Eukaryotic initiation factor 5A isoform 1, eIF-5A, Rev-binding factor, eIF-4D, EIF5A
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 ICC~~N/A E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	EIF5A Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	EIF5A (HGNC:3300)

Function	Translation factor that promotes translation elongation and termination, particularly upon ribosome stalling at specific amino acid sequence contexts (PubMed:33547280). Binds between the exit (E) and peptidyl (P) site of the ribosome and promotes rescue of stalled ribosome: specifically required for efficient translation of polyproline-containing peptides as well as other motifs that stall the ribosome (By similarity). Acts as a ribosome quality control (RQC) cofactor by joining the RQC complex to facilitate peptidyl transfer during CAT tailing step (By similarity). Also involved in actin dynamics and cell cycle progression, mRNA decay and probably in a pathway involved in stress response and maintenance of cell wall integrity (PubMed:16987817). With syntenin SDCBP, functions as a regulator of p53/TP53 and p53/TP53-dependent apoptosis (PubMed:15371445). Also regulates TNF-mediated apoptosis (PubMed:15452064, PubMed:17187778). Mediates effects of polyamines on neuronal process extension and survival (PubMed:17360499). Is required for autophagy by assisting the ribosome in translating the ATG3 protein at a specific amino acid sequence, the 'ASP-ASP-Gly' motif, leading to the increase of the efficiency of ATG3 translation and facilitation of LC3B lipidation and autophagosome formation (PubMed:29712776).
Cellular Location	Cytoplasm. Nucleus. Endoplasmic reticulum membrane; Peripheral membrane protein; Cytoplasmic side. Note=Hypusine modification promotes the nuclear export and cytoplasmic localization and there was a dynamic shift in the localization from predominantly cytoplasmic to primarily nuclear under apoptotic inducing conditions (PubMed:19379712, PubMed:27306458). Nuclear export of hypusinated protein is mediated by XPO4 (PubMed:10944119, PubMed:27306458).
Tissue Location	Expressed in umbilical vein endothelial cells and several cancer cell lines (at protein level)

Background

This gene is a member of the paired box (PAX) family of transcription factors. Members of the PAX family typically contain a paired box domain and a paired-type homeodomain. These genes play critical roles during fetal development. Mutations in paired box gene 3 are associated with Waardenburg syndrome, craniofacial-deafness-hand syndrome, and alveolar rhabdomyosarcoma. The translocation t(2;13)(q35;q14), which represents a fusion between PAX3 and the forkhead gene, is a frequent finding in alveolar rhabdomyosarcoma. Alternative splicing results in transcripts encoding isoforms with different C-termini. ; ;

References

1. Int J Cancer. 2011 Jul 1;129(1):143-50.2. Int J Cancer. 2010 Aug 15;127(4):968-76.

Images

