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EIF2A Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1898a

Product Information

Application	WB, IHC, FC, E
Primary Accession	Q9BY44
Reactivity	Human, Mouse, Rat, Monkey
Host	Mouse
Clonality	Monoclonal
Clone Names	3A7B11
Isotype	IgG1
Calculated MW	64990
Description	EIF2A is a 65-kD protein that catalyzes the formation of puromycin-sensitive 80S preinitiation complexes.
Immunogen	Purified recombinant fragment of human EIF2A (AA: 448-576) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide.

Additional Information

Gene ID	83939
Other Names	Eukaryotic translation initiation factor 2A, eIF-2A, 65 kDa eukaryotic translation initiation factor 2A, Eukaryotic translation initiation factor 2A, N-terminally processed, EIF2A
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 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	EIF2A Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	EIF2A
Function	Functions in the early steps of protein synthesis of a small number of specific mRNAs. Acts by directing the binding of methionyl- tRNAi to 40S ribosomal subunits. In contrast to the eIF-2 complex, it binds methionyl-tRNAi to 40S subunits in a codon-dependent manner, whereas the eIF-2 complex

	binds methionyl-tRNAi to 40S subunits in a GTP-dependent manner.
Tissue Location	Widely expressed. Expressed at higher level in pancreas, heart, brain and placenta.

Background

The protein encoded by this gene is a regulatory subunit of the AMP-activated protein kinase (AMPK). AMPK is a heterotrimer consisting of an alpha catalytic subunit, and non-catalytic beta and gamma subunits. AMPK is an important energy-sensing enzyme that monitors cellular energy status. In response to cellular metabolic stresses, AMPK is activated, and thus phosphorylates and inactivates acetyl-CoA carboxylase (ACC) and beta-hydroxy beta-methylglutaryl-CoA reductase (HMGCR), key enzymes involved in regulating de novo biosynthesis of fatty acid and cholesterol. This subunit is one of the gamma regulatory subunits of AMPK. Alternatively spliced transcript variants encoding distinct isoforms have been observed. ;

References

1. Mol Biol (Mosk). 2010 Sep-Oct;44(5):859-66. 2. Cancer Res. 2009 Feb 15;69(4):1545-52.

Images

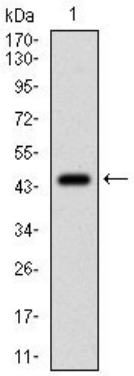


Figure 1: Western blot analysis using EIF2A mAb against human EIF2A (AA: 448-576) recombinant protein. (Expected MW is 40.3 kDa)

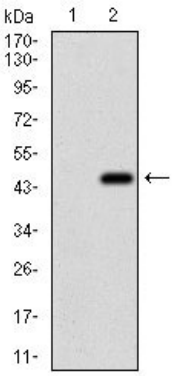


Figure 2: Western blot analysis using EIF2A mAb against HEK293 (1) and EIF2A (AA: 448-576)-hIgGFc transfected HEK293 (2) cell lysate.

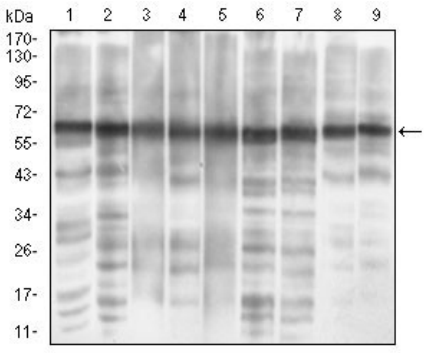
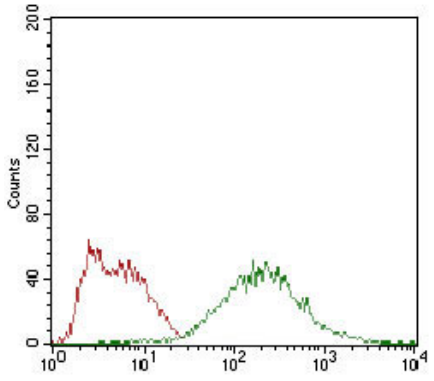


Figure 3: Western blot analysis using EIF2A mouse mAb against MCF-7 (1), PC-12 (2), HepG2 (3), Hela (4), Cos7 (5), K562 (6), Jurkat (7), A431 (8) and NIH/3T3 (9) cell lysate.

Figure 4: Flow cytometric analysis of HepG2 cells using EIF2A mouse mAb (green) and negative control (red).



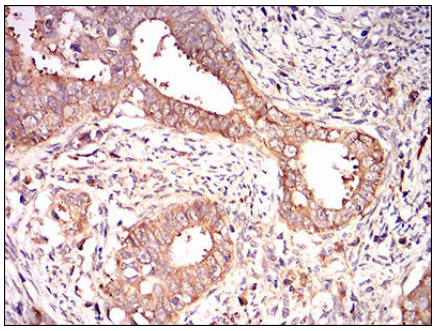


Figure 5: Immunohistochemical analysis of paraffin-embedded cervical cancer tissues using EIF2A mouse mAb with DAB staining.

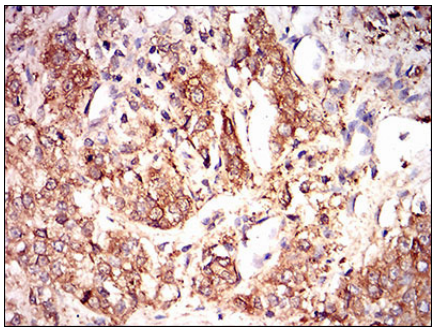


Figure 6: Immunohistochemical analysis of paraffin-embedded bladder cancer tissues using EIF2A mouse mAb with DAB staining.