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Mouse Monoclonal Antibody to EIF5
Purified Mouse Monoclonal Antibody
Catalog # AO2386a

Specification

Mouse Monoclonal Antibody to EIF5 - Product Information

Application	**WB, IHC, FC, ICC, E**
Primary Accession	P55010
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**Mouse IgG2a**
Calculated MW	**49.2kDa KDa**

Description
Eukaryotic translation initiation factor-5 (EIF5) interacts with the 40S initiation complex to promote hydrolysis of bound GTP with concomitant joining of the 60S ribosomal subunit to the 40S initiation complex. The resulting functional 80S ribosomal initiation complex is then active in peptidyl transfer and chain elongations (summary by Si et al., 1996 [PubMed 8663286]).;

Immunogen
Purified recombinant fragment of human EIF5 (AA: 1-300) expressed in E. Coli.

Formulation
Purified antibody in PBS with 0.05% sodium azide

Application Note
ELISA: 1/10000; WB: 1/500 - 1/2000; IHC: 1/200 - 1/1000; ICC: 1/50 - 1/250; FCM: 1/200 - 1/400

Mouse Monoclonal Antibody to EIF5 - Additional Information

Gene ID 1983

Other Names
EIF-5; EIF-5A

Dilution
WB~~1:1000
IHC~~1:100~500
FC~~1:10~50
ICC~~N/A
E~~N/A

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
Mouse Monoclonal Antibody to EIF5 is for research use only and not for use in diagnostic or therapeutic procedures.

Mouse Monoclonal Antibody to EIF5 - Protein Information

Name EIF5

Function
Component of the 43S pre-initiation complex (43S PIC), which binds to the mRNA cap-proximal region, scans mRNA 5'-untranslated region, and locates the initiation codon (PubMed:11166181, PubMed:22813744, PubMed:24319994). In this complex, acts as a GTPase- activating protein, by promoting GTP hydrolysis by eIF2G (EIF2S3) (PubMed:11166181). During scanning, interacts with both EIF1 (via its C-terminal domain (CTD)) and EIF1A (via its NTD) (PubMed:22813744). This interaction with EIF1A contributes to the maintenance of EIF1 within the open 43S PIC (PubMed:24319994). When start codon is recognized, EIF5, via its NTD, induces eIF2G (EIF2S3) to hydrolyze the GTP (PubMed:11166181). Start codon recognition also induces a conformational change of the PIC to a closed state (PubMed:22813744). This change increases the affinity of EIF5-CTD for EIF2-beta (EIF2S2), which allows the release, by an indirect mechanism, of EIF1 from the PIC (PubMed:22813744). Finally, EIF5 stabilizes the PIC in its closed conformation (PubMed:22813744).

Cellular Location
Cytoplasm.

Mouse Monoclonal Antibody to EIF5 - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Mouse Monoclonal Antibody to EIF5 - Images

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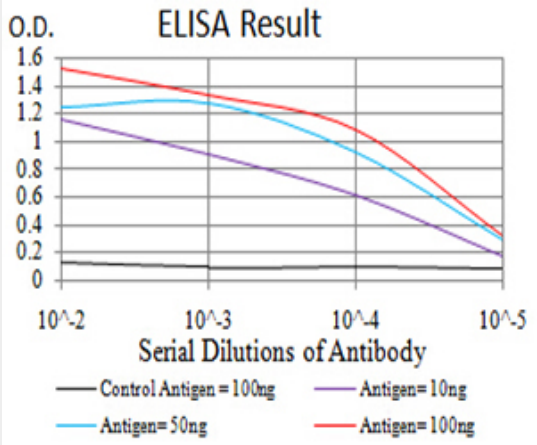
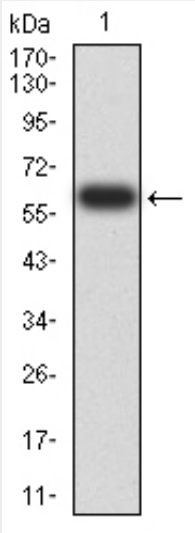
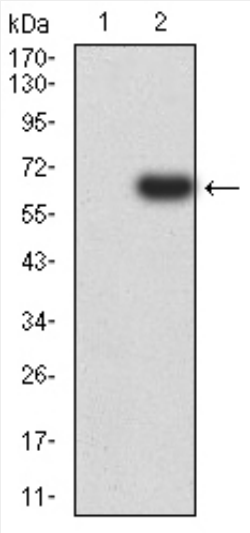


Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)



Western blot analysis using EIF5 mAb against human EIF5 (AA: 1-300) recombinant protein. (Expected MW is 60.2 kDa)



Western blot analysis using EIF5 mAb against HEK293 (1) and EIF5 (AA: 1-300)-hIgGFc transfected HEK293 (2) cell lysate.

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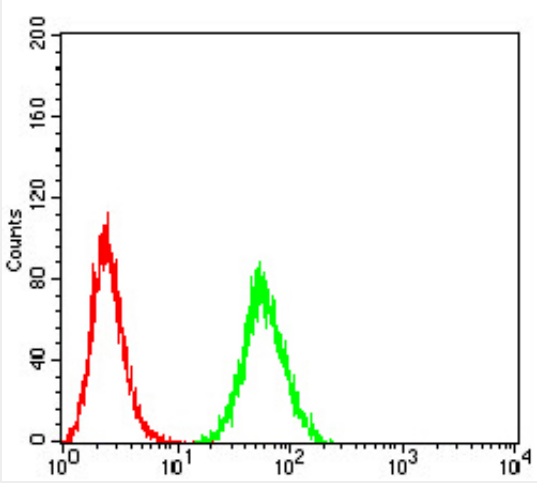
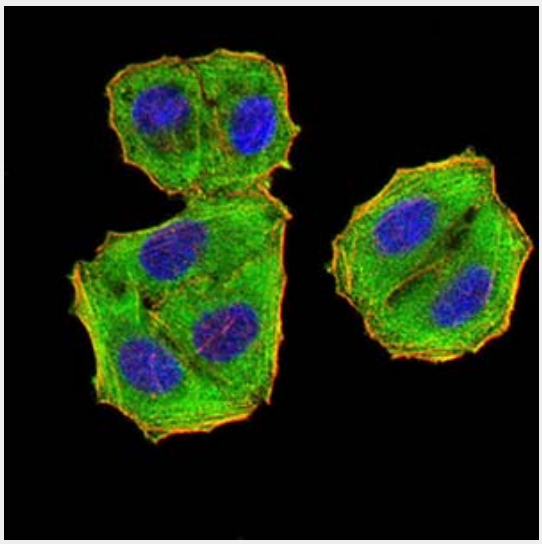
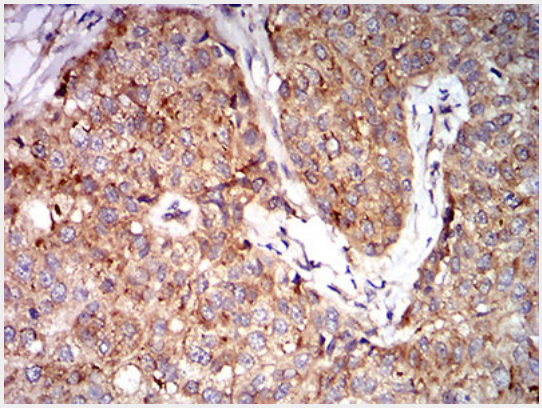


Flow cytometric analysis of Hela cells using EIF5 mouse mAb (green) and negative control (red).



Immunofluorescence analysis of Hela cells using EIF5 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor- 555 phalloidin. Secondary antibody from Fisher



Immunohistochemical analysis of paraffin-embedded bladder cancer tissues using EIF5 mouse mAb with DAB staining.

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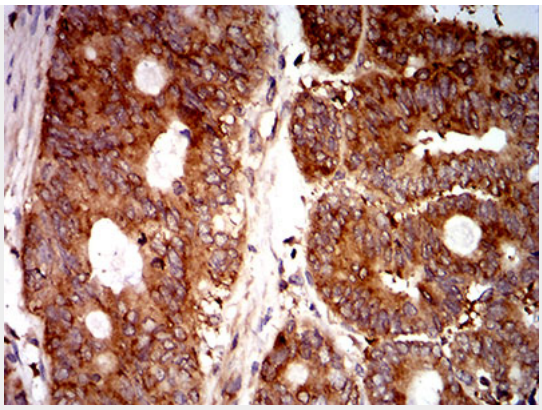

Immunohistochemical analysis of paraffin-embedded rectum cancer tissues using EIF5 mouse mAb with DAB staining.

Mouse Monoclonal Antibody to EIF5 - References

1.Biochemistry. 2006 Apr 11;45(14):4550-8. ; 2.Biochem Biophys Res Commun. 2011 Dec 2;415(4):567-72.;