10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

# Mouse Monoclonal Antibody to EIF5

Purified Mouse Monoclonal Antibody
Catalog # AO2387a

## Product Information

| | |
|---|---|
| **Application** | WB, E |
| **Primary Accession** | P55010 |
| **Reactivity** | Human, Monkey |
| **Host** | Mouse |
| **Clonality** | Monoclonal |
| **Clone Names** | 6D6G6 |
| **Isotype** | Mouse IgG2a |
| **Calculated MW** | 49223 |
| **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; |

## Additional Information

| | |
|---|---|
| **Gene ID** | 1983 |
| **Other Names** | EIF-5; EIF-5A |
| **Dilution** | WB~~1:1000 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. |

## 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 |

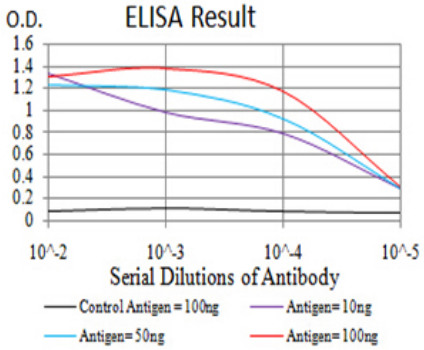
the initiation codon (PubMed:11166181, PubMed:22813744, PubMed:24319994). In this complex, acts as a GTPase- activating protein, by promoting GTP hydrolysis by eIF2G (EIF2S3) (PubMed:11166181). During scanning, interacts with both EIF1 (via its C-terminal domain (CTD)) and EIF1A (via its NTD) (PubMed:22813744). 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.

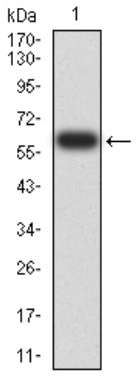
## References

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

## Images

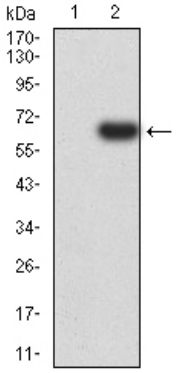


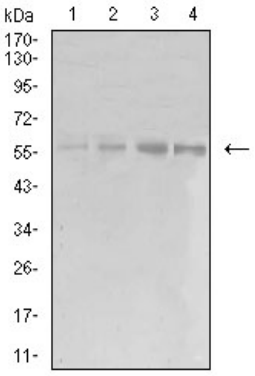

Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)




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.




Western blot analysis using EIF5 mouse mAb against K562 (1), COS7 (2), Hela (3), and A431 (4) cell lysate.