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# Anti-EIF6 Picoband Antibody

Catalog # ABO12268

## Product Information

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| **Application** | WB, IHC-P, ICC |
| **Primary Accession** | P56537 |
| **Host** | Rabbit |
| **Reactivity** | Human, Mouse, Rat |
| **Clonality** | Polyclonal |
| **Format** | Lyophilized |
| **Description** | Rabbit IgG polyclonal antibody for Eukaryotic translation initiation factor 6(EIF6) detection. Tested with WB, IHC-P, ICC in Human;Mouse; Rat. |
| **Reconstitution** | Add 0.2ml of distilled water will yield a concentration of 500ug/ml. |

## Additional Information

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| **Gene ID** | 3692 |
| **Other Names** | Eukaryotic translation initiation factor 6 {ECO:0000255\|HAMAP-Rule:MF_03132}, eIF-6 {ECO:0000255\|HAMAP-Rule:MF_03132}, B(2)GCN homolog, B4 integrin interactor, CAB, p27(BBP), IF6 |
| **Calculated MW** | 26599 |
| **Application Details** | Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, By Heat Immunocytochemistry, 0.5-1 □g/ml Western blot, 0.1-0.5 □g/ml |
| **Subcellular Localization** | Cytoplasm. Nucleus, nucleolus. Shuttles between cytoplasm and nucleus/nucleolus. |
| **Tissue Specificity** | Expressed at very high levels in colon carcinoma with lower levels in normal colon and ileum and lowest levels in kidney and muscle (at protein level). . |
| **Source** | Eukaryota |
| **Protein Name** | Eukaryotic translation initiation factor 6 |
| **Contents** | Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3. |
| **Immunogen** | E.coli-derived human EIF6 recombinant protein (Position: N66-T210). Human EIF6 shares 99.3% amino acid (aa) sequence identity with both mouse and rat EIF6. |
| **Purification** | Immunogen affinity purified. |

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| **Cross Reactivity** | No cross reactivity with other proteins |
| **Storage** | At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing. |

## Protein Information

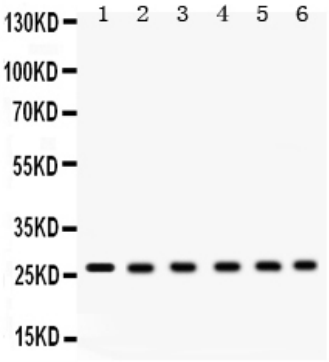
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|---|---|
| **Name** | EIF6 {ECO:0000255\|HAMAP-Rule:MF_03132, ECO:0000312\|HGNC:HGNC:6159} |
| **Function** | Binds to the 60S ribosomal subunit and prevents its association with the 40S ribosomal subunit to form the 80S initiation complex in the cytoplasm (PubMed:10085284, PubMed:14654845, PubMed:21536732, PubMed:32669547). Behaves as a stimulatory translation initiation factor downstream insulin/growth factors. Is also involved in ribosome biogenesis. Associates with pre-60S subunits in the nucleus and is involved in its nuclear export. Cytoplasmic release of TIF6 from 60S subunits and nuclear relocalization is promoted by a RACK1 (RACK1)- dependent protein kinase C activity (PubMed:10085284, PubMed:14654845, PubMed:21536732). In tissues responsive to insulin, controls fatty acid synthesis and glycolysis by exerting translational control of adipogenic transcription factors such as CEBPB, CEBPD and ATF4 that have G/C rich or uORF in their 5'UTR. Required for ROS-dependent megakaryocyte maturation and platelets formation, controls the expression of mitochondrial respiratory chain genes involved in reactive oxygen species (ROS) synthesis (By similarity). Involved in miRNA-mediated gene silencing by the RNA-induced silencing complex (RISC). Required for both miRNA-mediated translational repression and miRNA-mediated cleavage of complementary mRNAs by RISC (PubMed:17507929). Modulates cell cycle progression and global translation of pre-B cells, its activation seems to be rate-limiting in tumorigenesis and tumor growth (By similarity). |
| **Cellular Location** | Cytoplasm. Nucleus, nucleolus. Note=Shuttles between cytoplasm and nucleus/nucleolus |
| **Tissue Location** | Expressed at very high levels in colon carcinoma with lower levels in normal colon and ileum and lowest levels in kidney and muscle (at protein level). |

## Background

EIF6 (Eukaryotic Translation Initiation Factor 6), also called EIF3A or ITGB4BP, is a human gene. By fluorescence in situ hybridization, Sanvito et al. (1998) mapped the ITGB4BP gene to 20q11.2. Ceci et al. (2003) demonstrated that the ribosomal 60S subunit is activated by release of EIF6. In the cytoplasm, EIF6 is bound to free 60S but not to 80S subunits. Furthermore, EIF6 interacts in the cytoplasm with RACK1, a receptor for activated protein kinase C. Gandin et al. (2008) demonstrated that mammalian eIF6 is required for efficient initiation of translation in vivo. Eif6-null mouse embryos were lethal at preimplantation. Heterozygous mice had 50% reduction of eIF6 levels in all tissues, and showed reduced mass of hepatic and adipose tissues due to a lower number of cells and to impaired G1/S cell cycle progression.

## Images

Figure 1. Western blot analysis of EIF6 using anti-EIF6 antibody (ABO12268). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing




conditions. Lane 1: Rat Cardiac Muscle Tissue Lysate,Lane 2: Rat Liver Tissue Lysate,Lane 3: Mouse Liver Tissue Lysate,Lane 4: Human Placenta Tissue Lysate,Lane 5: COLO320 Whole Cell Lysate,Lane 6: HELA Whole Cell Lysate. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-EIF6 antigen affinity purified polyclonal antibody (Catalog # ABO12268) at 0.5 □¼g/mL overnight at 4 □°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for EIF6 at approximately 27KD. The expected band size for EIF6 is at 27KD.

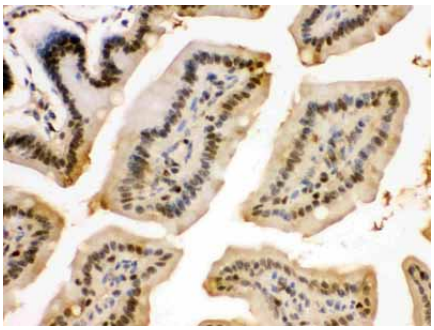


Figure 2. IHC analysis of EIF6 using anti-EIF6 antibody (ABO12268).EIF6 was detected in paraffin-embedded section of Mouse Intestine Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 □¼g/ml rabbit anti-EIF6 Antibody (ABO12268) overnight at 4 □°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 □°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

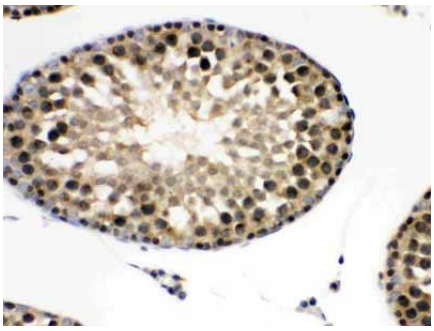


Figure 3. IHC analysis of EIF6 using anti-EIF6 antibody (ABO12268).EIF6 was detected in paraffin-embedded section of Rat Testis Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 □¼g/ml rabbit anti-EIF6 Antibody (ABO12268) overnight at 4 □°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 □°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

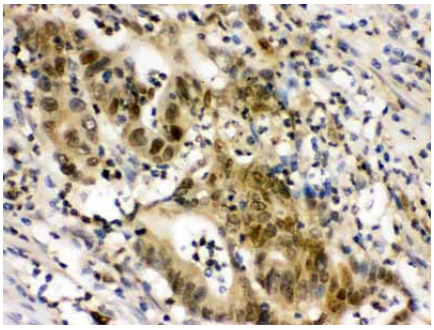


Figure 4. IHC analysis of EIF6 using anti-EIF6 antibody (ABO12268).EIF6 was detected in paraffin-embedded section of Human Intestinal Cancer Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 □¼g/ml rabbit anti-EIF6 Antibody (ABO12268) overnight at 4 □°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 □°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

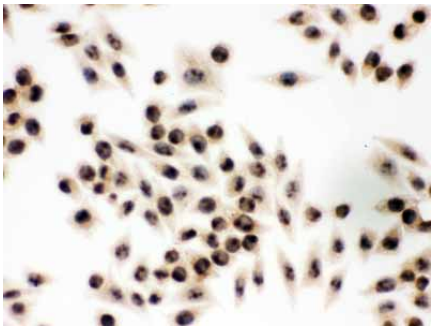


Figure 5. IHC analysis of EIF6 using anti-EIF6 antibody (ABO12268).EIF6 was detected in immunocytochemical section of SMMC-7721 cell. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 □¼g/ml rabbit anti-EIF6 Antibody (ABO12268) overnight at 4 □°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 □°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

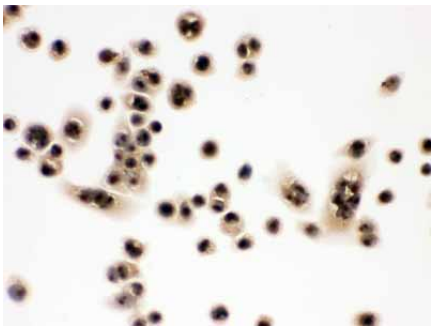


Figure 6. IHC analysis of EIF6 using anti-EIF6 antibody (ABO12268).EIF6 was detected in immunocytochemical section of SW480 cell. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 □¼g/ml rabbit anti-EIF6 Antibody (ABO12268) overnight at 4 □°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 □°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

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