

### **EIF5 Antibody (Center)**

Purified Rabbit Polyclonal Antibody (Pab) Catalog # AP22055c

### Specification

# EIF5 Antibody (Center) - Product Information

Application Primary Accession Other Accession Reactivity Predicted Host Clonality Isotype Calculated MW WB,E <u>P55010</u> <u>P59325</u>, <u>O5R4L0</u>, <u>O07205</u> Human Mouse, Rat Rabbit polyclonal Rabbit IgG 49223

## EIF5 Antibody (Center) - Additional Information

Gene ID 1983

**Other Names** Eukaryotic translation initiation factor 5, eIF-5, EIF5

Target/Specificity

This EIF5 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 267-298 amino acids from the Central region of human EIF5.

**Dilution** WB~~1:2000 E~~Use at an assay dependent concentration.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions** EIF5 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

## EIF5 Antibody (Center) - 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:<u>11166181</u>, PubMed:<u>22813744</u>, PubMed:<u>24319994</u>). In this complex, acts as a GTPaseactivating protein, by promoting GTP hydrolysis by eIF2G (EIF2S3) (PubMed:<u>11166181</u>). During scanning, interacts with both EIF1 (via its C-terminal domain (CTD)) and EIF1A (via its NTD) (PubMed:<u>22813744</u>). This interaction with EIF1A contributes to the maintenance of EIF1 within the open 43S PIC (PubMed:<u>24319994</u>). When start codon is recognized, EIF5, via its NTD, induces eIF2G (EIF2S3) to hydrolyze the GTP (PubMed:<u>11166181</u>). Start codon recognition also induces a conformational change of the PIC to a closed state (PubMed:<u>22813744</u>). 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:<u>22813744</u>). Finally, EIF5 stabilizes the PIC in its closed conformation (PubMed:<u>22813744</u>).

Cellular Location Cytoplasm.

## EIF5 Antibody (Center) - Protocols

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

- <u>Western Blot</u>
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

#### EIF5 Antibody (Center) - Images



Anti-EIF5 Antibody (Center) at 1:2000 dilution + K562 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 49 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

#### EIF5 Antibody (Center) - Background

Catalyzes the hydrolysis of GTP bound to the 40S ribosomal initiation complex



(40S.mRNA.Met-tRNA[F].elF-2.GTP) with the subsequent joining of a 60S ribosomal subunit resulting in the release of elF-2 and the guanine nucleotide. The subsequent joining of a 60S ribosomal subunit results in the formation of a functional 80S initiation complex (80S.mRNA.Met-tRNA[F]).

### EIF5 Antibody (Center) - References

Si K.,et al.J. Biol. Chem. 271:16934-16938(1996). Wiemann S.,et al.Genome Res. 11:422-435(2001). Ota T.,et al.Nat. Genet. 36:40-45(2004). Bechtel S.,et al.BMC Genomics 8:399-399(2007). Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.