

## Product datasheet for **AP20746PU-M**

### eIF2 alpha (EIF2S1) Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	<b>Western blot:</b> 1/500 - 1/1000. <b>Immunohistochemistry on paraffin sections</b> 1/50 - 1/200.
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Specificity:	This antibody detects endogenous levels of eIF2alpha protein. (region surrounding Ile45)
Formulation:	Phosphate buffered saline (PBS), pH 7.2. State: Aff - Purified State: Liquid purified Ig fraction Preservative: 0.05% sodium azide
Concentration:	1.0 mg/ml
Purification:	Affinity chromatography (> 95% (by SDS-PAGE)
Conjugation:	Unconjugated
Storage:	Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Predicted Protein Size:	~ 38 kDa
Gene Name:	eukaryotic translation initiation factor 2 subunit alpha
Database Link:	<u><a href="#">Entrez Gene 13665 Mouse</a></u> <u><a href="#">Entrez Gene 54318 Rat</a></u> <u><a href="#">Entrez Gene 1965 Human</a></u> <u><a href="#">P05198</a></u>



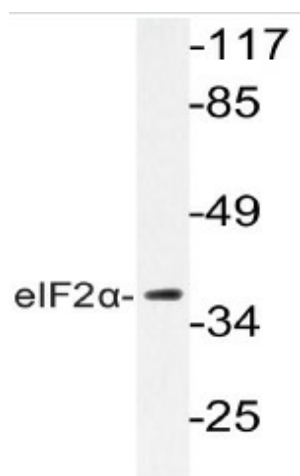
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**Background:**

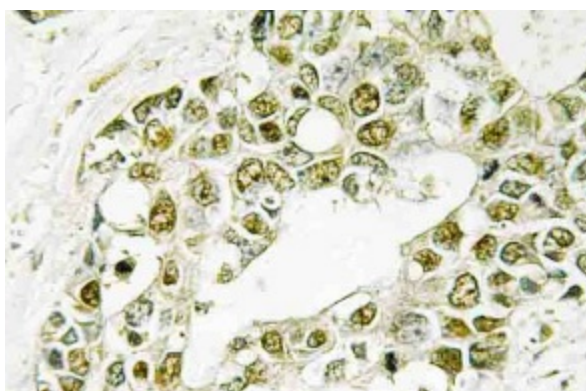
The initiation of protein synthesis in eukaryotic cells is regulated by interactions between protein initiation factors and RNA molecules. The eukaryotic initiation complex is composed of three subunits, designated eIF2alpha, eIF2beta and eIF2gamma (eukaryotic translation initiation factor 2 alpha, beta and gamma, respectively), all of which work in concert to form a ternary complex with GTP and tRNA in the early stages of protein synthesis. eIF2alpha, also known as EIF2S1 or EIF2, is a 315 amino acid subunit of the eukaryotic initiation complex that functions to bind tRNA to the 40S ribosomal subunit (in a GTP-dependent manner), thereby initiating translation. In addition, the phosphorylation state of eIF2alpha controls the rate of tRNA translation. When eIF2alpha is not phosphorylated, translation occurs at a normal rate. However, upon phosphorylation by one of several kinases, eIF2alpha is stabilized, thus preventing the GDP/GTP exchange reaction and slowing translation.

**Synonyms:**

EIF2-A, eIF-2A, eIF-2-alpha, eIF-2alpha, eIF2 alpha

**Product images:**


Western blot (WB) analyzes of eIF2alpha antibody (Cat.-No.: [AP20746PU-N]) in extracts from K562 cells.



Immunohistochemistry (IHC) analyzes of eIF2alpha antibody (Cat.-No.: [AP20746PU-N]) in paraffin-embedded human breast carcinoma tissue.