

#11511

## eIF2 $\alpha$ (phospho-Ser49) Antibody

**Catalog:** #11511-1 50 $\mu$ l **Orders:** [order@signalwayantibody.com](mailto:order@signalwayantibody.com)  
#11511-2 100 $\mu$ l **Support:** [tech@signalwayantibody.com](mailto:tech@signalwayantibody.com)  
**Storage:** Store at -20°C/1 year **Web:** [www.signalwayantibody.com](http://www.signalwayantibody.com)



Application	Species Reactivity	Source	Molecular Wt.
WB IHC IF	Human Mouse Rat	Rabbit Polyconal Ab	38KD

**Description:** Antibodies were produced by immunizing rabbits with synthetic phosphopeptide and KLH conjugates. Antibodies were purified by affinity-chromatography using epitope-specific phosphopeptide. Non-phospho specific antibodies were removed by chromatography using non-phosphopeptide.

**Specificity:** The antibody detects endogenous level of eIF2 $\alpha$  only when phosphorylated at Serine 49.

**Immunogen:** Peptide sequence around phosphorylation site of Serine 49 (L-L-S(p)-E-L) derived from Human eIF2 $\alpha$ .

**Formulation:** Supplied at 1.0mg/mL in phosphate buffered saline (without Mg<sup>2+</sup> and Ca<sup>2+</sup>), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.

**Synonyms:** Eukaryotic translation initiation factor 2 subunit alpha

**Accession No.:** Swiss-Prot#: P05198      NCBI Gene#: 1965  
NCBI Protein#: NP\_004085.1

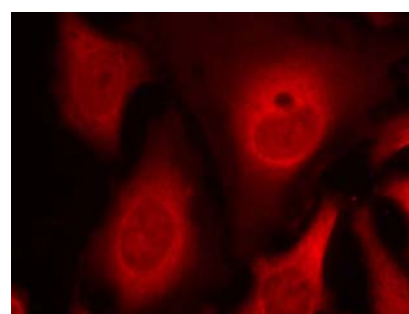
**Background:** Functions in the early steps of protein synthesis by forming a ternary complex with GTP and initiator tRNA. This complex binds to a 40S ribosomal subunit, followed by mRNA binding to form a 43S preinitiation complex. Junction of the 60S ribosomal subunit to form the 80S initiation complex is preceded by hydrolysis of the GTP bound to eIF-2 and release of an eIF-2-GDP binary complex. In order for eIF-2 to recycle and catalyze another round of initiation, the GDP bound to eIF-2 must exchange with GTP by way of a reaction catalyzed by eIF-2B.

### References:

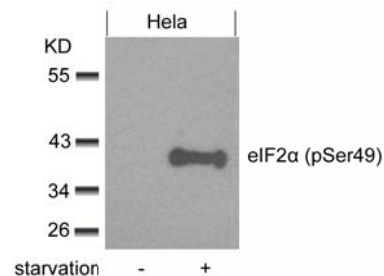
- Kimball, S.R. (1999) Int. J. Biochem. Cell Biol. 31, 25-29.  
De Haro, C. et al. (1996) FASEB J. 10, 1378-1387.  
Sheikh, M.S. and Fornace Jr., A.J. (1999) Oncogene 18, 6121-6128.  
Cheshire, J.L. et al. (1999) J. Biol. Chem. 274, 4801-4806.

### Recommended Dilutions:

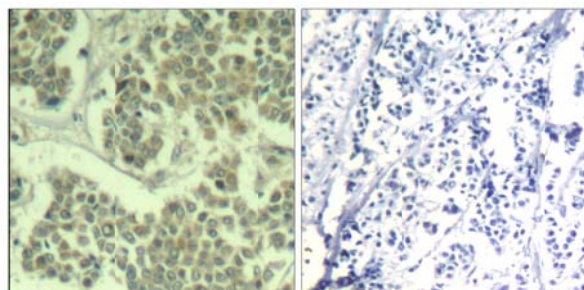
Western blotting 1:500~1:1000  
Immunohistochemistry 1:50~1:100  
Immunofluorescence 1:100~1:200



Immunofluorescence staining of methanol-fixed HeLa cells using eIF2 $\alpha$  (phospho-Ser49) Antibody #11511.



Western blot analysis of extracts from HeLa cells untreated or treated with starvation using eIF2 $\alpha$  (phospho-Ser49) Antibody #11511.



Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using eIF2 $\alpha$  (Phospho-Ser49) Antibody #11511 (left) or the same antibody preincubated with blocking peptide (right).

### Citation:

If you publish research using #11511 please [let us know](#).

**Related Pathway:** Akt, Translation

**Note:** For western blotting, incubate membrane with diluted antibody in 5% nonfat milk, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

This product is for in vitro research use only and is not intended for use in humans or animals.