

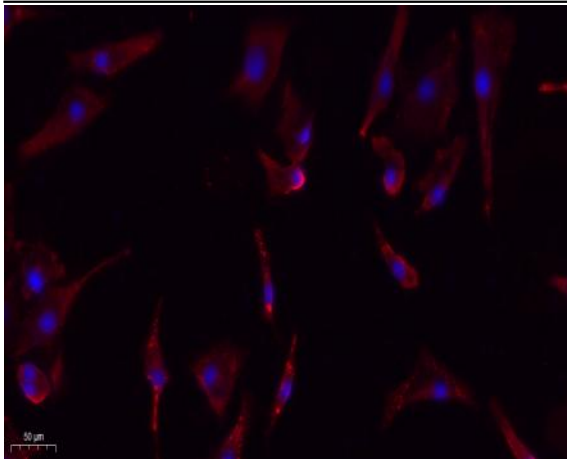
**eIF2 $\alpha$  (phospho Ser51) Polyclonal Antibody**

<b>Catalog No :</b>	YP0093
<b>Reactivity :</b>	Human;Mouse;Rat;Dog;Pig;Fish
<b>Applications :</b>	IF;WB;IHC;ELISA
<b>Target :</b>	eIF2 $\alpha$
<b>Fields :</b>	>>Autophagy - animal;>>Protein processing in endoplasmic reticulum;>>Apoptosis;>>Non-alcoholic fatty liver disease;>>Alzheimer disease;>>Parkinson disease;>>Amyotrophic lateral sclerosis;>>Prion disease;>>Pathways of neurodegeneration - multiple diseases;>>Hepatitis C;>>Measles;>>Influenza A;>>Herpes simplex virus 1 infection;>>Lipid and atherosclerosis
<b>Gene Name :</b>	EIF2S1
<b>Protein Name :</b>	Eukaryotic translation initiation factor 2 subunit 1
<b>Human Gene Id :</b>	1965
<b>Human Swiss Prot No :</b>	P05198
<b>Mouse Gene Id :</b>	13665
<b>Mouse Swiss Prot No :</b>	Q6ZWX6
<b>Rat Gene Id :</b>	54318
<b>Rat Swiss Prot No :</b>	P68101
<b>Immunogen :</b>	The antiserum was produced against synthesized peptide derived from human eIF2 alpha around the phosphorylation site of Ser51. AA range:21-70
<b>Specificity :</b>	Phospho-eIF2 $\alpha$ (S51) Polyclonal Antibody detects endogenous levels of eIF2 $\alpha$ protein only when phosphorylated at S51.
<b>Formulation :</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

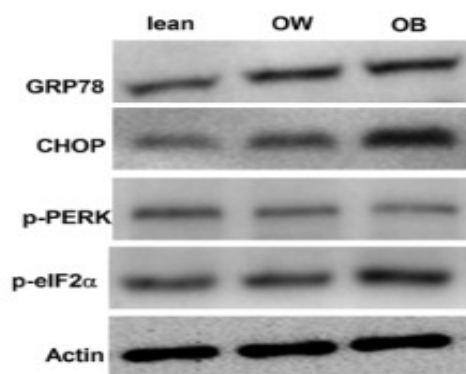
<b>Source :</b>	Polyclonal, Rabbit,IgG
<b>Dilution :</b>	IF 1:50-200 WB 1:500 - 1:2000. IHC 1:100 - 1:300. ELISA: 1:10000. Not yet tested in other applications.
<b>Purification :</b>	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
<b>Concentration :</b>	1 mg/ml
<b>Storage Stability :</b>	-15°C to -25°C/1 year(Do not lower than -25°C)
<b>Observed Band :</b>	38kD
<b>Background :</b>	The translation initiation factor EIF2 catalyzes the first regulated step of protein synthesis initiation, promoting the binding of the initiator tRNA to 40S ribosomal subunits. Binding occurs as a ternary complex of methionyl-tRNA, EIF2, and GTP. EIF2 is composed of 3 nonidentical subunits, the 36-kD EIF2-alpha subunit (EIF2S1), the 38-kD EIF2-beta subunit (EIF2S2; MIM 603908), and the 52-kD EIF2-gamma subunit (EIF2S3; MIM 300161). The rate of formation of the ternary complex is modulated by the phosphorylation state of EIF2-alpha (Ernst et al., 1987 [PubMed 2948954]).[supplied by OMIM, Feb 2010],
<b>Function :</b>	function: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.,PTM:Substrate for at least 4 kinases: EIF2AK3/PERK, GCN2, HRI and PKR. Phosphorylation stabilizes the eIF-2/GDP/eIF-2B complex and prevents GDP/GTP exchange reaction, thus impairing the recycling of eIF-2 between successive rounds of initiation and leading to global inhibition of translation. In case of infection by vaccinia virus or rotavirus
<b>Subcellular Location :</b>	Cytoplasm, Stress granule . Colocalizes with NANOS3 in the stress granules. .
<b>Expression :</b>	B cells,Brain,Fibroblast,Placenta,

---

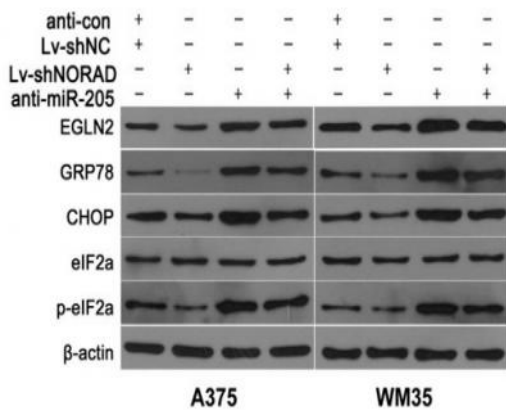
## Products Images



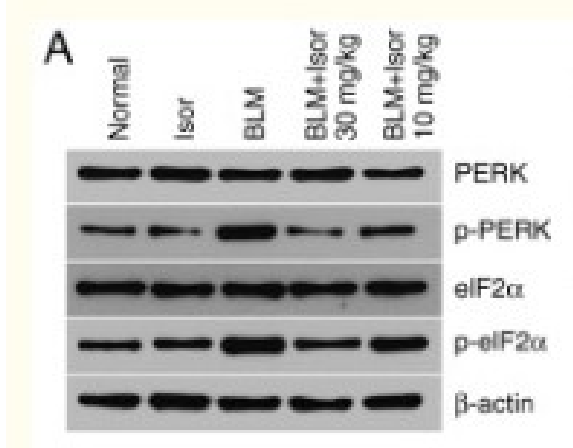
Immunofluorescence analysis of A549. 1,primary Antibody(red) was diluted at 1:200(4°C overnight). 2, Goat Anti Rabbit IgG (H&L) - Alexa Fluor 594 Secondary antibody was diluted at 1:1000(room temperature, 50min).3, Picture B: DAPI(blue) 10min.



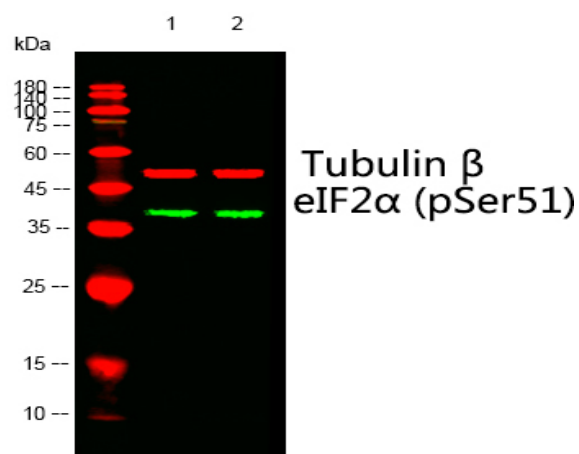
Lei, Ting, et al. "Stress kinases, endoplasmic reticulum stress, and Alzheimer's disease related markers in peripheral blood mononuclear cells from subjects with increased body weight." *Scientific reports* 6 (2016): 30890.



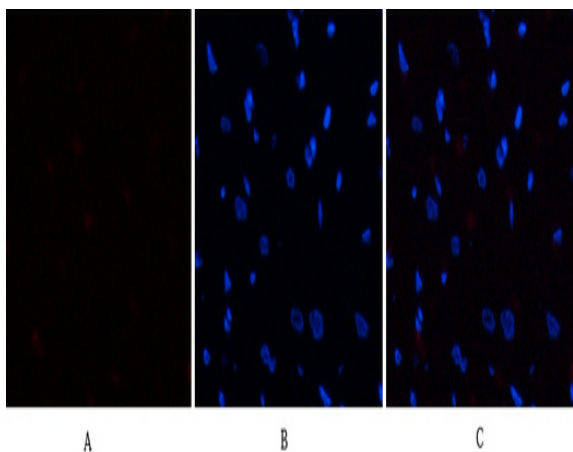
Chen, Yong, et al. "Overexpression of long non-coding RNA NORAD promotes invasion and migration in malignant melanoma via regulating the MIR-205-EGLN2 pathway." *Cancer medicine* (2019).



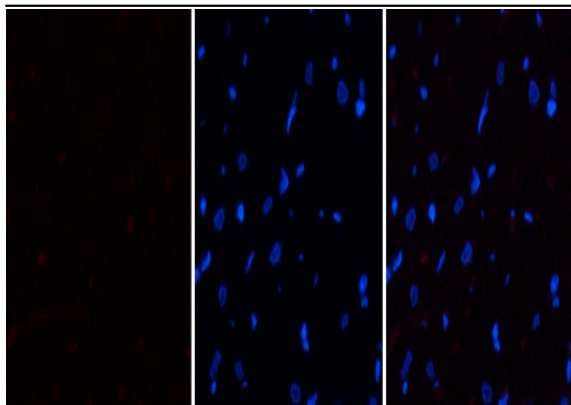
Zheng, Qing, et al. "Isorhamnetin protects against bleomycin-induced pulmonary fibrosis by inhibiting endoplasmic reticulum stress and epithelial-mesenchymal transition." *International journal of molecular medicine* 43.1 (2019): 117-126.



Western blot analysis of lysates from 1) KB, 2) MCF-7 cells, (Green) primary antibody was diluted at 1:1000, 4° over night, Dylight 800 secondary antibody(Immunoway:RS23920)was diluted at 1:10000, 37° 1hour. (Red) Tubulin β Monoclonal Antibody(5G3) (Immunoway:YM3030) antibody was diluted at 1:5000 as loading control, 4° over night, Dylight 680 secondary antibody(Immunoway:RS23710)was diluted at 1:10000, 37° 1hour.



Immunofluorescence analysis of rat-heart tissue. 1, eIF2α (phospho Ser51) Polyclonal Antibody(red) was diluted at 1:200(4°C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300(room temperature, 50min). 3, Picture B: DAPI(blue) 10min. Picture A:Target. Picture B: DAPI. Picture C: merge of A+B

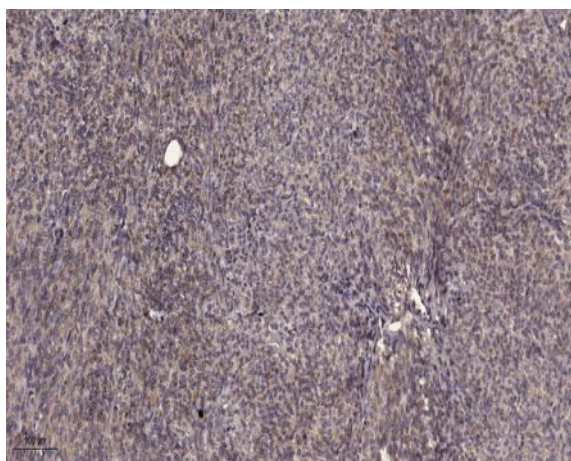


A

B

C

Immunofluorescence analysis of rat-heart tissue. 1,eIF2 $\alpha$  (phospho Ser51) Polyclonal Antibody(red) was diluted at 1:200(4°C,overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300(room temperature, 50min).3, Picture B: DAPI(blue) 10min. Picture A:Target. Picture B: DAPI. Picture C: merge of A+B



Immunohistochemical analysis of paraffin-embedded human Colon cancer. 1, Antibody was diluted at 1:200(4° overnight). 2, Tris-EDTA,pH9.0 was used for antigen retrieval. 3,Secondary antibody was diluted at 1:200(room temperature, 45min).