

**PERK (phospho Thr981) Polyclonal Antibody**

<b>Catalog No :</b>	YP1055
<b>Reactivity :</b>	Human;Mouse;Rat
<b>Applications :</b>	IF;WB;IHC;ELISA
<b>Target :</b>	PERK
<b>Fields :</b>	>>Mitophagy - animal;>>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;>>Herpes simplex virus 1 infection;>>Lipid and atherosclerosis
<b>Gene Name :</b>	EIF2AK3
<b>Protein Name :</b>	Eukaryotic translation initiation factor 2-alpha kinase 3
<b>Human Gene Id :</b>	9451
<b>Human Swiss Prot No :</b>	Q9NZJ5
<b>Mouse Swiss Prot No :</b>	Q9Z2B5
<b>Rat Gene Id :</b>	29702
<b>Rat Swiss Prot No :</b>	Q9Z1Z1
<b>Immunogen :</b>	The antiserum was produced against synthesized peptide derived from human PEK/PERK around the phosphorylation site of Thr981. AA range:947-996
<b>Specificity :</b>	Phospho-PERK (T981) Polyclonal Antibody detects endogenous levels of PERK protein only when phosphorylated at T981.
<b>Formulation :</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Source :</b>	Polyclonal, Rabbit,IgG

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<b>Dilution :</b>	IF 1:50-200 WB 1:500-2000 ,IHC 1:100 - 1:300. ELISA: 1:40000. 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>	130kD
<b>Cell Pathway :</b>	Alzheimer's disease;
<b>Background :</b>	The protein encoded by this gene phosphorylates the alpha subunit of eukaryotic translation-initiation factor 2, leading to its inactivation, and thus to a rapid reduction of translational initiation and repression of global protein synthesis. This protein is thought to modulate mitochondrial function. It is a type I membrane protein located in the endoplasmic reticulum (ER), where it is induced by ER stress caused by malformed proteins. Mutations in this gene are associated with Wolcott-Rallison syndrome. [provided by RefSeq, Sep 2015],
<b>Function :</b>	catalytic activity:ATP + a protein = ADP + a phosphoprotein.,disease:Defects in EIF2AK3 are the cause of Wolcott-Rallison syndrome (WRS) [MIM:226980]; also known as multiple epiphyseal dysplasia with early-onset diabetes mellitus. WRS is a rare autosomal recessive disorder, characterized by permanent neonatal or early infancy insulin-dependent diabetes and, at a later age, epiphyseal dysplasia, osteoporosis, growth retardation and other multisystem manifestations, such as hepatic and renal dysfunctions, mental retardation and cardiovascular abnormalities.,domain:The luminal domain senses perturbations in protein folding in the ER, probably through reversible interaction with HSPA5/BIP.,enzyme regulation:Perturbation in protein folding in the endoplasmic reticulum (ER) promotes reversible dissociation from HSPA5/BIP and oligomerization, resulting in transautophosphorylation and kinase act
<b>Subcellular Location :</b>	Endoplasmic reticulum membrane; Single-pass type I membrane protein.
<b>Expression :</b>	Ubiquitous. A high level expression is seen in secretory tissues.
<b>Tag :</b>	orthogonal
<b>Sort :</b>	1
<b>No2 :</b>	3179S

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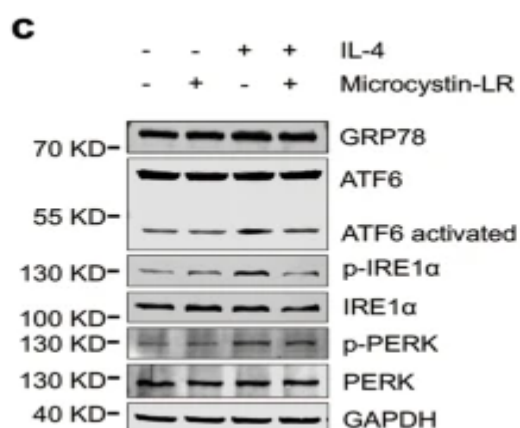
**No3 :** ab192591

**No4 :** 1

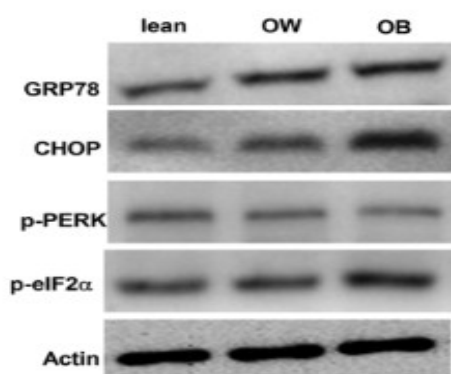
**Host :** Rabbit

**Modifications :** Phospho

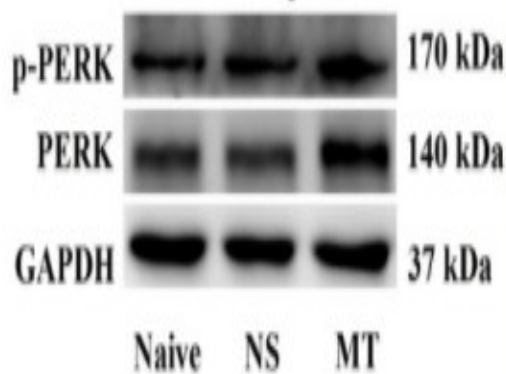
## Products Images



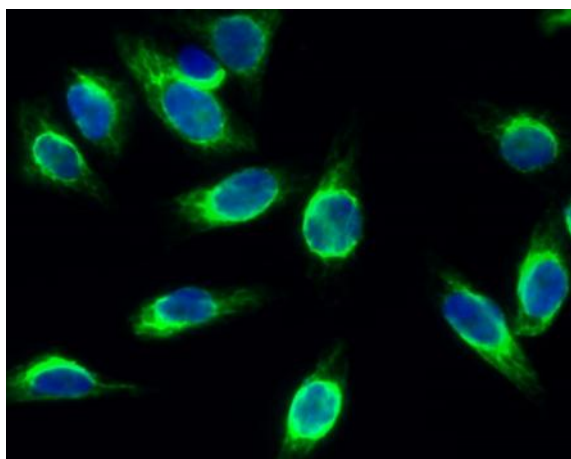
Wang, J., Xu, L., Xiang, Z. et al. Microcystin-LR ameliorates pulmonary fibrosis via modulating CD206+ M2-like macrophage polarization. *Cell Death Dis* 11, 136 (2020).



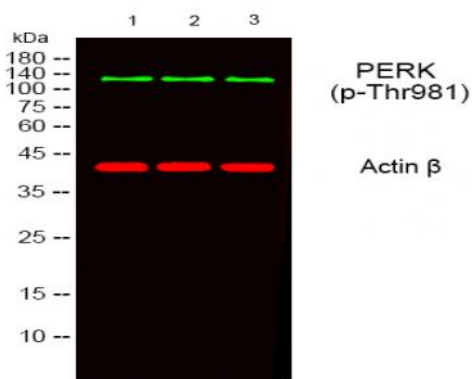
Lei, Ting, et al. "Stress kinases, endoplasmic reticulum stress, and Alzheimer's disease related markers in peripheral blood mononuclear cells from subjects with increased body weight." *Scientific reports* 6 (2016): 30890.



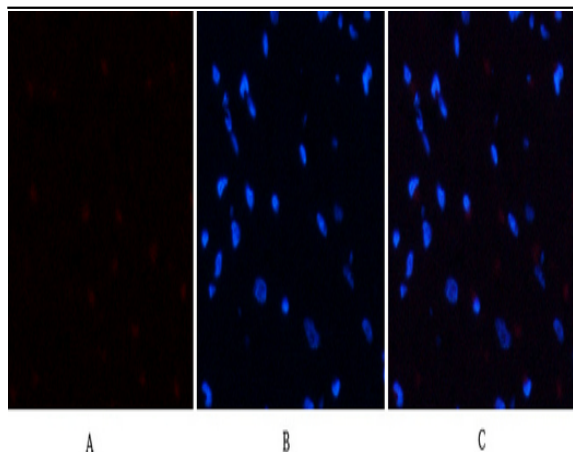
Liu, Daiqiang, et al. "Endoplasmic Reticulum Stress in Spinal Cord Contributes to the Development of Morphine Tolerance." *Frontiers in molecular neuroscience* 11 (2018): 72.



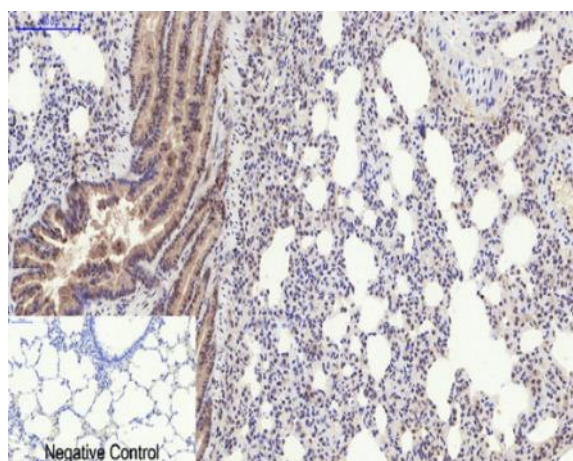
Immunofluorescence analysis of HeLa cell. 1, PERK (phospho Thr981) Polyclonal Antibody (green) was diluted at 1:200 (4° overnight). 2, Goat Anti Rabbit Alexa Fluor 488 Catalog: RS3211 was diluted at 1:1000 (room temperature, 50 min). 3 DAPI (blue) 10 min.



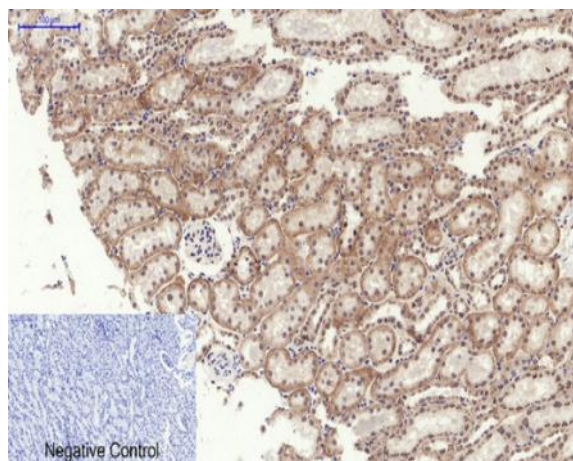
Western blot analysis of lysates from 1) 453, 2) AD293, 3) HeLa cells. [Green] primary antibody was diluted at 1:1000, 4° overnight, secondary antibody (cat: RS23920) was diluted at 1:10000, 37° 1 hour. [Red] Actin  $\beta$  Monoclonal Antibody (5B7) (cat: YM3028) antibody was diluted at 1:5000 as loading control, 4° overnight, secondary antibody (cat: RS23710) was diluted at 1:10000, 37° 1 hour.



Immunofluorescence analysis of rat-heart tissue. 1,PERK (phospho Thr981) 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

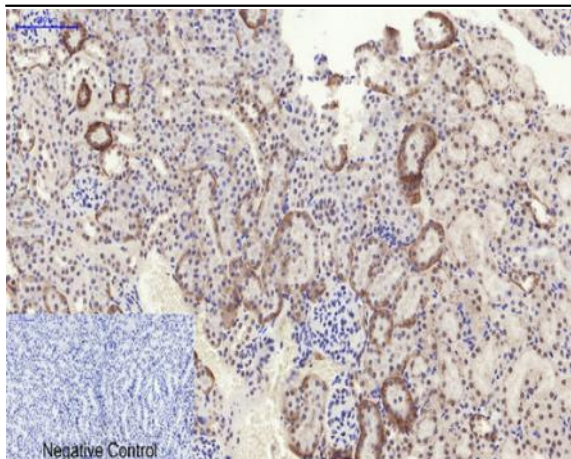


Immunohistochemical analysis of paraffin-embedded Rat-lung tissue. 1,PERK (phospho Thr981) Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.

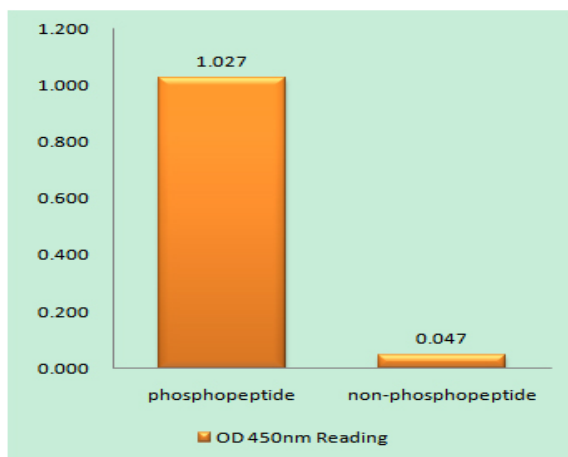


Immunohistochemical analysis of paraffin-embedded Rat-kidney tissue. 1,PERK (phospho Thr981) Polyclonal Antibody was diluted at 1:200(4°C,overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C,20min). 3,Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.

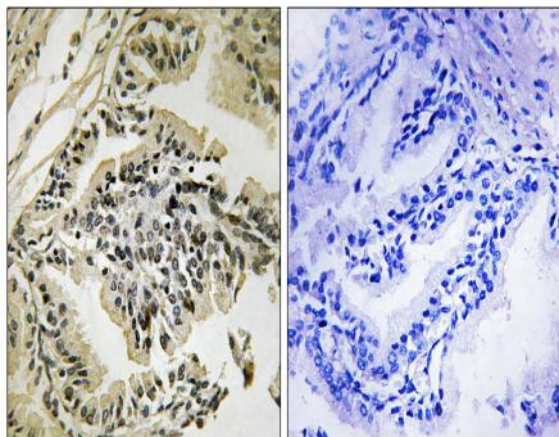




Immunohistochemical analysis of paraffin-embedded Mouse kidney tissue. 1, PERK (phospho Thr981) Polyclonal Antibody was diluted at 1:200(4°C, overnight). 2, Sodium citrate pH 6.0 was used for antibody retrieval(>98°C, 20min). 3, Secondary antibody was diluted at 1:200(room temperature, 30min). Negative control was used by secondary antibody only.



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using PEK/PERK (Phospho-Thr981) Antibody



Immunohistochemistry analysis of paraffin-embedded human prostate carcinoma, using PEK/PERK (Phospho-Thr981) Antibody. The picture on the right is blocked with the phosphopeptide.