



# PERK (phospho Thr981) Polyclonal Antibody

<b>Catalog No</b>	YP-Ab-14556
<b>Isotype</b>	IgG
<b>Reactivity</b>	Human;Mouse;Rat
<b>Applications</b>	IF;WB;IHC;ELISA
<b>Gene Name</b>	EIF2AK3
<b>Protein Name</b>	Eukaryotic translation initiation factor 2-alpha kinase 3
<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
<b>Purification</b>	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
<b>Dilution</b>	IF: 1:50-200 WB 1:500-2000 ,Immunohistochemistry: 1/100 - 1/300. ELISA: 1/40000. Not yet tested in other applications.
<b>Concentration</b>	1 mg/ml
<b>Purity</b>	≥90%
<b>Storage Stability</b>	-20°C/1 year
<b>Synonyms</b>	EIF2AK3; PEK; PERK; Eukaryotic translation initiation factor 2-alpha kinase 3; PRKR-like endoplasmic reticulum kinase; Pancreatic eIF2-alpha kinase; HsPEK
<b>Observed Band</b>	130kD
<b>Cell Pathway</b>	Endoplasmic reticulum membrane; Single-pass type I membrane protein.
<b>Tissue Specificity</b>	Ubiquitous. A high level expression is seen in secretory tissues.
<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 lumenal 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

**Background**

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],

**matters needing attention**

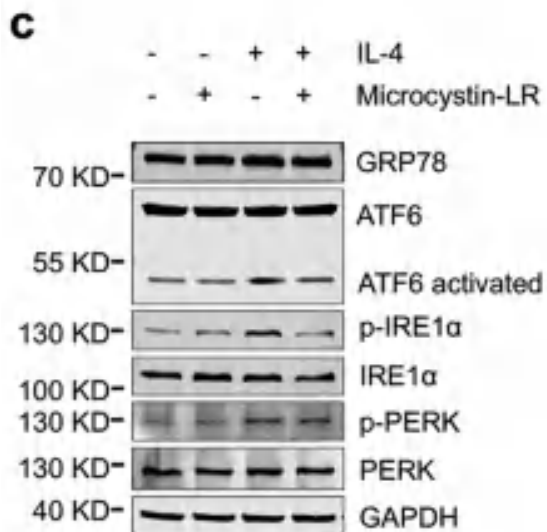
Avoid repeated freezing and thawing!

**Usage suggestions**

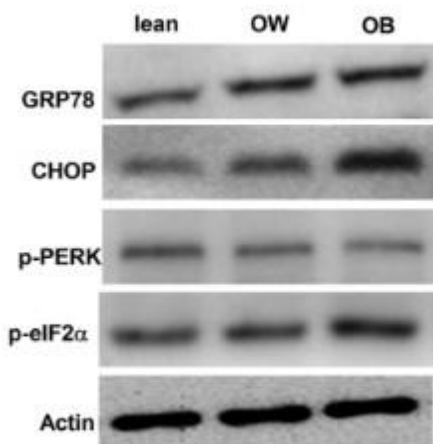
This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



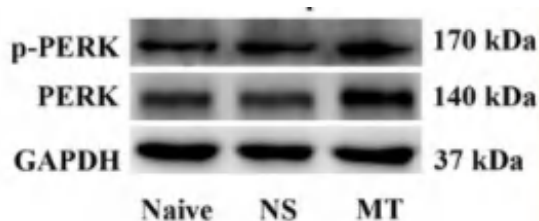
## Products Images



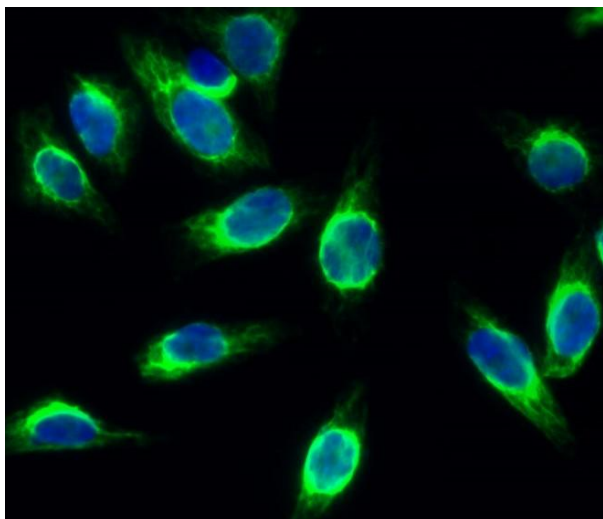
Wang, J., Xu, L., Xiang, Z. et al. Microcystin-LR ameliorates pulmonary fibrosis via modulating CD206+ M2-like macrophage polarization. *Cell Death Dis* 11, 136 (2020).



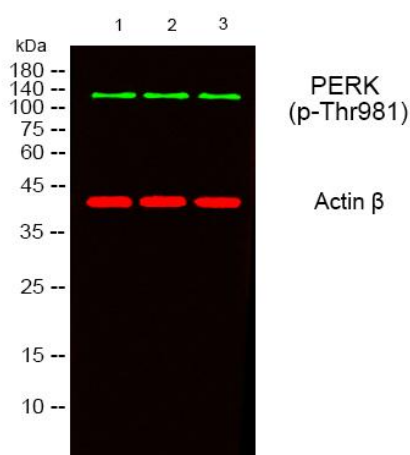
Lei, Ting, et al. "Stress kinases, endoplasmic reticulum stress, and Alzheimer's disease related markers in peripheral blood mononuclear cells from subjects with increased body weight." *Scientific reports* 6 (2016): 30890.



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, 50min). 3 DAPI(blue) 10min.



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