



PERK (Phospho Thr982) Rabbit pAb

Catalog No	YP-Ab-19368
Isotype	IgG
Reactivity	Human
Applications	IF、WB、IHC、ELISA
Gene Name	EIF2AK3
Immunogen	The antiserum was produced against synthesized peptide derived from human PEK/PERK around the phosphorylation site of Thr982. AA range:947-996
Specificity	Phospho-PERK (T982) Polyclonal Antibody detects endogenous levels of PERK protein only when phosphorylated at T982. The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):THtGQ
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source	Polyclonal, Rabbit,IgG
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Dilution	IF 1:50-200; WB 1:500-2000; IHC 1:100-1:300; ELISA 1:40000; Not yet tested in other applications; Note: For IHC, we suggest antigen retrieval with TE buffer pH 9.0
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	EIF2AK3;Eukaryotic translation initiation factor 2-alpha kinase 3;PEK;PERK;PRKR-like endoplasmic reticulum kinase;Pancreatic eIF2-alpha kinase;HsPEK
Observed Band	130kD
Calculated Molecular Weight	125kD
Cell Pathway	Endoplasmic reticulum membrane; Single-pass type I membrane protein.
Tissue Specificity	Ubiquitous. A high level expression is seen in secretory tissues.



Function

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 activity induction.,Function:Phosphorylates the alpha subunit of eukaryotic translation-initiation factor 2 (EIF2), leading to its inactivation and thus to a rapid reduction of translational initiation and repression of global protein synthesis. Serves as a critical effector of unfolded protein response (UPR)-induced G1 growth arrest due to the loss of cyclin D1.,induction:By ER stress.,PTM:Autophosphorylated., PTM:N-glycosylated.,similarity:Belongs to the protein kinase superfamily., similarity:Belongs to the protein kinase superfamily. Ser/Thr protein kinase family. GCN2 subfamily.,similarity:Contains 1 protein kinase domain., subunit:Forms dimers with HSPA5/BIP in resting cells. Oligomerizes in ER-stressed cells. Interacts with DNAJC3.,tissue specificity:Ubiquitous. A high level expression is seen in secretory tissues.,

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],

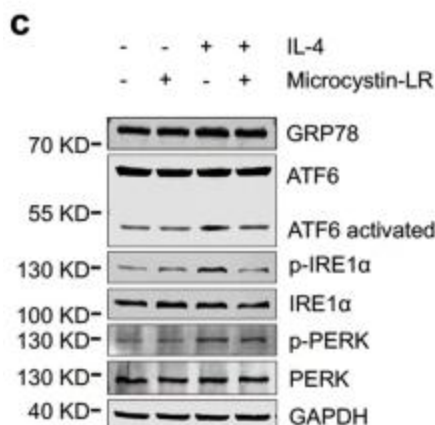
matters needing attention

Avoid repeated freezing and thawing!

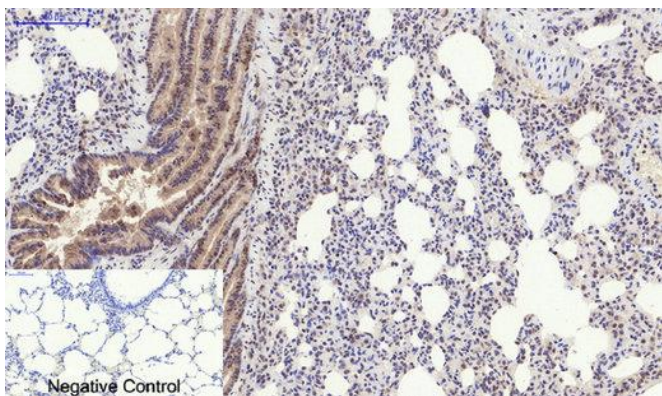
Usage suggestions

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

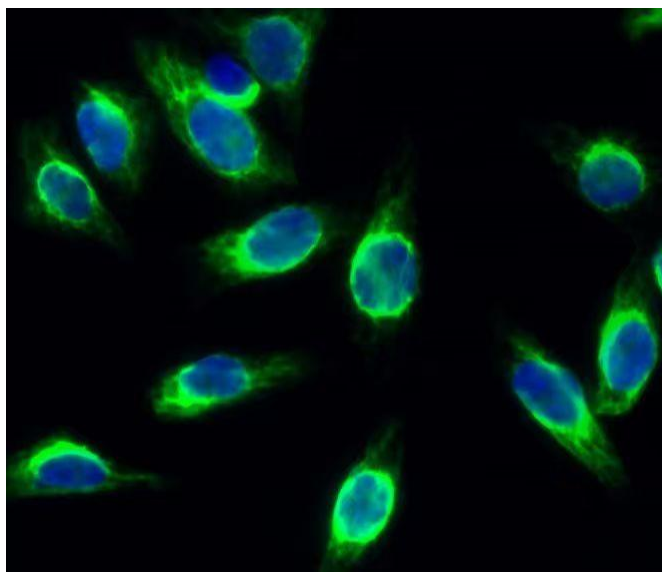
Products Images



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).



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.



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