

PERK (PT0310R) PT™ Rabbit mAb

CatalogNo: YM8183 **Recombinant** 

Key Features

Host Species

- Rabbit

Reactivity

- Human, Mouse, Rat,

Applications

- WB, IF, IP, ELISA

MW

- 125kD (Calculated)
- 140kD (Observed)

Isotype

- IgG, Kappa

Recommended Dilution Ratios

WB 1:1000-1:5000**IF 1:200-1:1000****ELISA 1:5000-1:20000****IP 1:50-1:200,**

Storage

Storage* -15°C to -25°C/1 year (Do not lower than -25°C)**Formulation** PBS, 50% glycerol, 0.05% Proclin 300, 0.05% BSA

Basic Information

Clonality Monoclonal**Clone Number** PT0310R

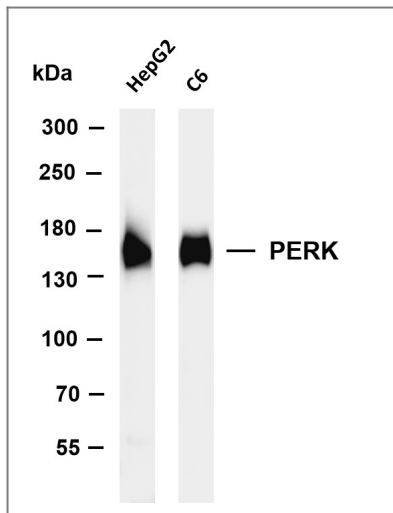
Immunogen Information

Sequence Eukaryotic translation initiation factor 2-alpha kinase 3**Specificity** Endogenous

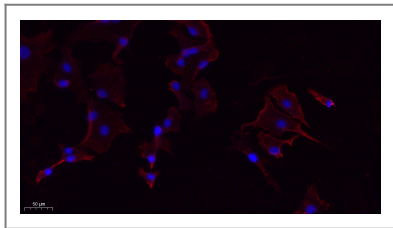
Target Information

Gene name	EIF2AK3		
Protein Name	Eukaryotic translation initiation factor 2-alpha kinase 3 (PRKR-like endoplasmic reticulum kinase) (Pancreatic eIF2-alpha kinase) (HsPEK)		
	Organism	Gene ID	UniProt ID
	Human	9451 ;	Q9NZJ5 ;
	Mouse		Q9Z2B5 ;
	Rat	29702 ;	Q9Z1Z1 ;
Cellular Localization	Endoplasmic reticulum membrane		
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.,		

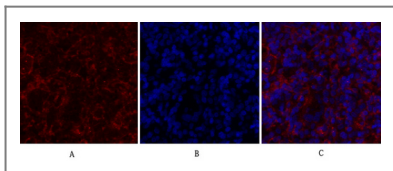
Validation Data



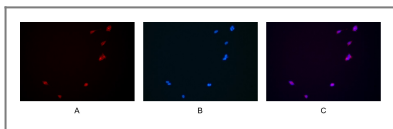
Various whole cell lysates were separated by 4-8% SDS-PAGE, and the membrane was blotted with anti-PERK antibody. The HRP-conjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: HepG2 Lane 2: C6 Predicted band size: 125kDa Observed band size: 140kDa



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, DAPI(blue) 10min.



Immunofluorescence analysis of rat-spleen tissue. 1,PERK 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



Immunofluorescence analysis of HEK293. Picture A: Bax antibody (red). Picture B: DAPI (blue). Picture C: Merge of A+B

Contact information

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PERK (PT0310R)
PT™ Rabbit mAb