PERK (ANT0010R) Rabbit mAb

CatalogNo: ANT8183 Recombinant

Formulation: PBS,50%glycerol,0.05%Proclin 300,0.05%BSA
Quantity : 100 ug/vial

Host Species
- Rabbit

MW
- 125kD (Calculated)

140kD (Observed)

Reactivity
- Human,Mouse,Rat,

Isotype
- IgG,Kappa

Applications
- WB,IF,IP,ELISA

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)

Basic Information

Clonality	Monoclonal
Clone Number	ANT0010R

Immunogen Information

Squence	Eukaryotic translation initiation factor 2-alpha kinase 3

Target Information

Specificity	Endogenous
Gene name	>>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
Protein Name	EIF2AK3

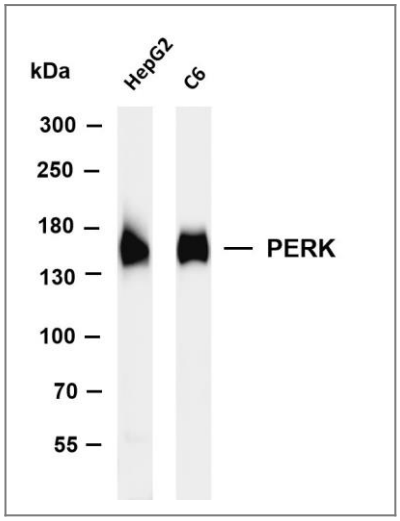
Organism	Gene ID	UniProt ID
Human	9451;	Q9NZJ5;
Mouse		Q9Z2B5;
Rat	29702;	Q9Z1Z1;

Cellular Localization	Endoplasmic reticulum membrane

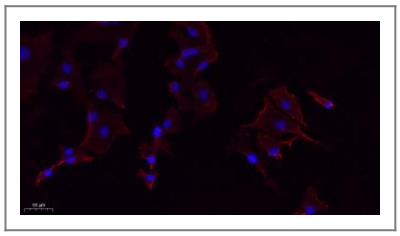
Tissue specificity Ubiquitous. A high level expression is seen in secretory tissues.

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 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 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.,ANTM: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.,

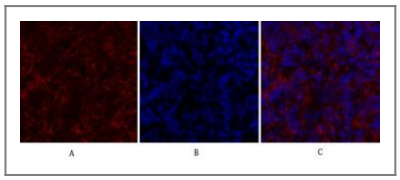
Validation Data



Various whole cell lysates were separated by 4-8% SDS-PAGE, and the membrane was blotted with anti-PERK (ANT0010R) antibody. The HRPconjugated 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, Picture B: DAPI(blue) 10min.



Immunofluorescence analysis of rat-spleen tissue. 1,PERK Antibody(red) was diluted at 1:200(4°C,overnight). 2, Cy3 labled 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