

## Anti-PERK Polyclonal Antibody

## Product Details

Ig Type:	IgG
Reactivity:	Human,Mouse,Rat
Molecular Weight:	Theoretical: 122 kDa. Actual: 145 kDa.
Purification:	Protein A purified

## Applications

1. Tissue/cell: mouse stomach tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, pH6.0), Boiling bathing for 15 min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30 min; Blocking buffer (normal goat serum) at 37°C for 20 min; Incubation: Anti-PERK Polyclonal Antibody, Unconjugated (TMAB-01372) 1:200, overnight at 4° C, followed by conjugation to the secondary antibody and DAb staining.
2. Blank control: U-87Mg (blue). Primary Antibody: Rabbit Anti-PERK antibody (TMAB-01372), Dilution: 1 µg in 100 µL 1X PBS containing 0.5% BSA; Isotype Control Antibody: Rabbit IgG (orange), used under the same conditions); Secondary Antibody: Goat anti-rabbit IgG-Pe (white blue), Dilution: 1:200 in 1 X PBS containing 0.5% BSA.

## Protocol

The cells were fixed with 2% paraformaldehyde (10 min), then permeabilized with 90% ice-cold methanol for 30 min on ice. Primary antibody (TMAB-01372, 1 µg/1x10<sup>6</sup> cells) were incubated for 30 min on the ice, followed by 1 X PBS containing 0.5% BSA + 10% goat serum (15 min) to block non-specific protein-protein interactions. Then the Goat Anti-rabbit IgG/PE antibody was added into the blocking buffer mentioned above to react with the primary antibody at 1/200 dilution for 30 min on ice.

## Verified Activity:

3. Paraformaldehyde-fixed, paraffin embedded (rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 min; Blocking buffer (normal goat serum) at 37°C for 30 min; Antibody incubation with (PERK) Polyclonal Antibody, Unconjugated (TMAB-01372) at 1:200 overnight at 4°C, followed by operating according to SP Kit (Rabbit) instructions and DAB staining.
4. Paraformaldehyde-fixed, paraffin embedded (mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 min; Blocking buffer (normal goat serum) at 37°C for 30 min; Antibody incubation with (PERK) Polyclonal Antibody, Unconjugated (TMAB-01372) at 1:200 overnight at 4°C, followed by operating according to SP Kit (Rabbit) instructions and DAB staining.

## 5. Sample:

Lane 1: Cerebrum (Mouse) Lysate at 40 µg

Lane 2: Cerebrum (Rat) Lysate at 40 µg

Primary: Anti-PERK (TMAB-01372) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 150 kDa

Observed band size: 145 kDa

## 6. Sample:

Hela (Human) Cell Lysate at 30 µg

293t (Human) Cell Lysate at 30 µg

Primary: Anti-PERK (TMAB-01372) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 122 kDa

Observed band size: 122 kDa

7. Blank control (black line): K562. Primary Antibody (green line): Rabbit Anti-PERK antibody (TMAB-01372)

Dilution: 2 µg/Test;

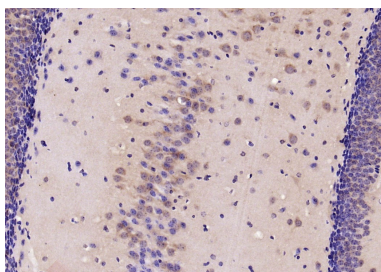
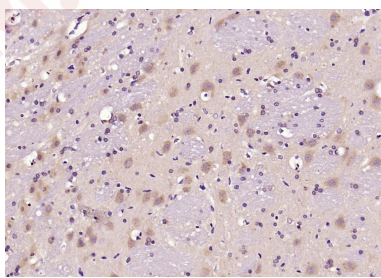
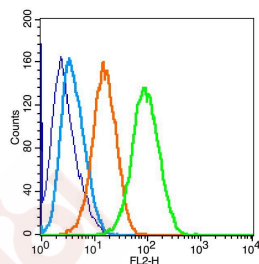
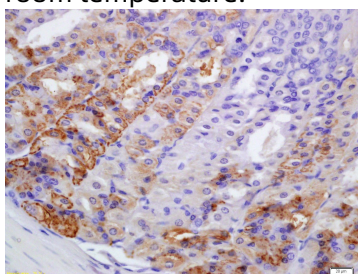
Secondary Antibody (white blue line): Goat anti-rabbit IgG-AF488

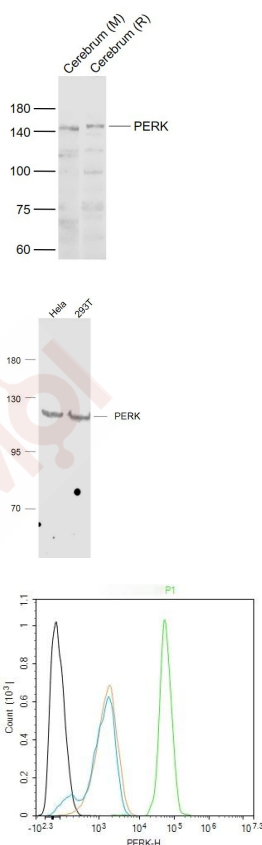
Dilution: 0.5 µg/Test.

Isotype control (orange line): Normal Rabbit IgG

Protocol

The cells were fixed with 4% PFA (10 min at room temperature) and then permeabilized with 90% ice-cold methanol for 20 min at -20°C, The cells were then incubated in 5% BSA to block non-specific protein-protein interactions for 30 min at room temperature. Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature.





Application: FCM,IF,IHC-Fr,IHC-P,WB

Recommended WB: 1:500-2000; IHC-P: 1:100-500; IHC-Fr: 1:100-500; IF: 1:100-500; FCM: 2µg/Test

### Properties

Stability & Storage: Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.

Shipping: Shipping with blue ice.

### Antigen Details

Immunogen: KLH conjugated synthetic peptide: human PERK

Antigen Species: Human

Gene ID: 9451

Uniprot ID: Q9NZJ5

Synonyms: HsPEK;WRS;PEK;Pancreatic eIF2-alpha kinase;DKFZp781H1925;E2AK3;Pancreatic eIF2 alpha kinase;EC 2.7.11.1;PRKR-like endoplasmic reticulum kinase;HRI;Eukaryotic translation initiation factor 2 alpha kinase 3;Heme regulated EIF2 alpha kinase;EIF2AK3

Biology Area: Regulation,Eukaryotic Initiation factors (eIF's),Diabetes,Metabolic disorders,Obesity

### Research Background

The protein encoded by this gene 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. 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, Jan 2010].

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