

For Research Use Only

# PERK/EIF2AK3 Polyclonal antibody



Catalog Number: 20582-1-AP

Featured Product

46 Publications

## Basic Information

### Catalog Number:

20582-1-AP

### Size:

150ul, Concentration: 500 µg/ml by Nanodrop and 460 µg/ml by Bradford method using BSA as the standard;

### Source:

Rabbit

### Isotype:

IgG

### GenBank Accession Number:

NM\_004836

### GeneID (NCBI):

9451

### Full Name:

eukaryotic translation initiation factor 2-alpha kinase 3

### Calculated MW:

125 kDa

### Observed MW:

140 kDa

### Purification Method:

Antigen affinity purification

### Recommended Dilutions:

WB 1:500-1:2000

IHC 1:50-1:500

IF 1:10-1:100

## Applications

### Tested Applications:

IF, IHC, WB, ELISA

### Cited Applications:

IHC, WB

### Species Specificity:

human, mouse

### Cited Species:

bovine, human, mouse, rat

### Positive Controls:

WB: HEK-293 cells, mouse pancreas tissue, HepG2 cells, MCF-7 cells

IHC: human pancreas cancer tissue,

IF: HeLa cells,

**Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

## Background Information

PERK, also named as EIF2AK3 or PEK, belongs to the protein kinase superfamily, Ser/Thr protein kinase family and GCN2 subfamily. It acts potentially as a metabolic sensor in the INS-secreting beta-cells to modulate the trafficking and quality control of pro-INS in the ER relative to the physiological demands for circulating INS (PMID:20530744). PERK and EIF2AK4 also have a functional role on regulating translation under non-stressed conditions, apart from their long established roles as stress kinases (PMID: 21638082). Defects in EIF2AK3 are the cause of Wolcott-Rallison syndrome (WRS). The molecular mass of PERK is 125 kDa and can be detected as 140 kDa or 170 kDa due to some modifications such as glycosylation and phosphorylation (PMID: 20851775, 24371088, 21703327). This antibody is specific to PERK.

## Notable Publications

Author	Pubmed ID	Journal	Application
Han Liao	26415619	Chem Biol Interact	WB
Yu Chen	34592660	Cell Calcium	WB
Xiaowei Niu	30232231	Biosci Rep	WB

## Storage

### Storage:

Store at -20°C. Stable for one year after shipment.

### Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

Aliquoting is unnecessary for -20°C storage

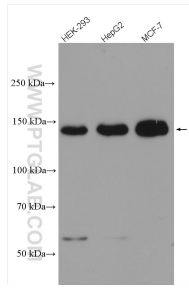
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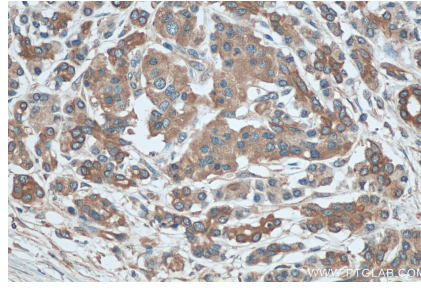
E: proteintech@ptglab.com  
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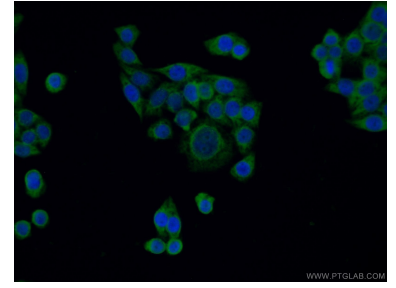
## Selected Validation Data



Various lysates were subjected to SDS PAGE followed by western blot with 20582-1-AP (PERK/EIF2AK3 antibody) at dilution of 1:1000 incubated at room temperature for 1.5 hours.



Immunohistochemical analysis of paraffin-embedded human pancreas cancer tissue slide using 20582-1-AP (PERK/EIF2AK3 antibody) at dilution of 1:200 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of HeLa cells using 20582-1-AP (PERK/EIF2AK3 antibody) at dilution of 1:25 and Alexa Fluor 488-conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).