

For Research Use Only

# PERK/EIF2AK3 Polyclonal antibody

Catalog Number: 20582-1-AP

Featured Product

114 Publications



## Basic Information

### Catalog Number:

20582-1-AP

### Size:

150ul, Concentration: 800 ug/ml by Nanodrop;

### Source:

Rabbit

### Isotype:

IgG

### GenBank Accession Number:

NM\_004836

### GeneID (NCBI):

9451

### UNIPROT ID:

Q9NZJ5

### 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/ICC 1:50-1:500

## Applications

### Tested Applications:

WB, IHC, IF/ICC, FC (Intra), ELISA

### Cited Applications:

WB, IHC, IF, CoIP

### Species Specificity:

human

### Cited Species:

human, pig, bovine

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

### Positive Controls:

WB : HEK-293 cells, HepG2 cells, MCF-7 cells

IHC : human pancreas cancer tissue,

IF/ICC : HEK-293 cells,

## 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
Samusi Adediran	36230550	Cancers (Basel)	WB
Yu Chen	34592660	Cell Calcium	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

\*\*\* 20ul sizes contain 0.1% BSA

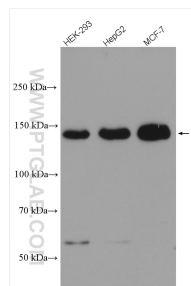
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

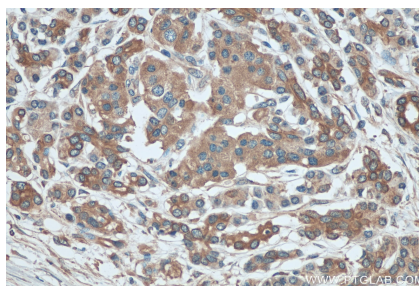
E: [proteintech@ptglab.com](mailto:proteintech@ptglab.com)  
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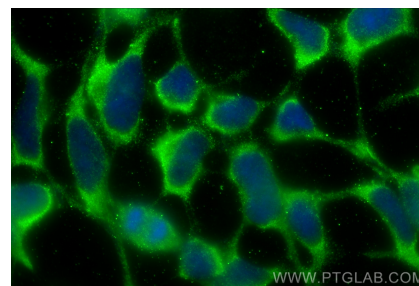
## Selected Validation Data



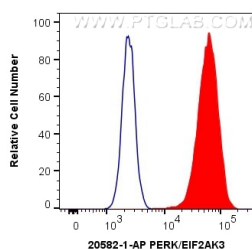
Various lysates were subjected to SDS PAGE followed by western blot with 20582-1-AP (PERK/EIF2AK3 antibody) at dilution of 1:1000 incubated at room temperature for 1.5 hours.



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 (-20°C Ethanol) fixed HEK-293 cells using PERK/EIF2AK3 antibody (20582-1-AP) at dilution of 1:200 and Multi-rAb CoraLite® Plus 488-Goat Anti-Rabbit Recombinant Secondary Antibody (H+L) (RGAR002).



1X10<sup>6</sup> HepG2 cells were intracellularly stained with 0.4 ug Anti-Human PERK/EIF2AK3 (20582-1-AP) and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) at dilution 1:1000 (red), or 0.4 ug Control Antibody. Cells were fixed with 4% PFA and permeabilized with Flow Cytometry Perm Buffer (PF00011-C).