

For Research Use Only

# GADD34 Polyclonal antibody

Catalog Number: 10449-1-AP

Featured Product

135 Publications



## Basic Information

### Catalog Number:

10449-1-AP

### Size:

150ul, Concentration: 700 ug/ml by Nanodrop;

### Source:

Rabbit

### Isotype:

IgG

### Immunogen Catalog Number:

AG0578

### GenBank Accession Number:

BC003067

### GeneID (NCBI):

23645

### UNIPROT ID:

O75807

### Full Name:

protein phosphatase 1, regulatory (inhibitor) subunit 15A

### Calculated MW:

73 kDa

### Observed MW:

100 kDa

### Purification Method:

Antigen affinity purification

### Recommended Dilutions:

WB: 1:1000-1:6000

IP: 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate

IHC: 1:50-1:500

IF/ICC: 1:200-1:800

## Applications

### Tested Applications:

WB, IHC, IF/ICC, IP, ELISA

### Cited Applications:

WB, IHC, IF, IP

### Species Specificity:

human, mouse

### Cited Species:

human, mouse, rat, pig, monkey, hamster

**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:** MG132 treated NIH/3T3 cells, Tunicamycin treated HeLa cells, PC-3 cells, K-562 cells, HepG2 cells, Jurkat cells

**IP:** K-562 cells, NIH/3T3 cells

**IHC:** human pancreas tissue, human colon cancer tissue

**IF/ICC:** MG132 treated U2OS cells,

## Background Information

GADD34, also named PPP1R15A, belongs to the PPP1R15 family. GADD34 can be triggered as a direct target of activating transcription factor 4 (ATF4) under ER stress, it plays a pivotal role in the recovery of cells from shut-down of translation induced by ER stress. It recruits the serine/threonine-protein phosphatase (PP1) to dephosphorylate the translation initiation factor eIF2alpha, thereby reversing the shut-off of protein synthesis initiated by stress-inducible kinases and facilitating recovery of cells from stress. GADD34 down-regulates the TGF-beta signaling pathway by promoting dephosphorylation of TGFβ1 via PP1. It may also promote apoptosis by inducing TP53 phosphorylation on 'Ser-15'. Starvation-induced expression of GADD34 reduced mTOR activity and induced autophagy in wild-type mice, but not in GADD34 KO mice. Molecular weight of GADD34 is 100 kDa confirmed in GADD34 KO mice, and Proteintech's GADD34 antibody 10449-1-AP primarily recognize the 100 kDa band.

## Notable Publications

Author	Pubmed ID	Journal	Application
Rebecca R Miles	34597669	J Biol Chem	WB
Gennaro Gambardella	32978159	Sci Adv	WB
Linhao Jiang	36212697	Front Cell Neurosci	WB

## Storage

### Storage:

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

### Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol, pH7.3

Aliquoting is unnecessary for -20°C storage

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

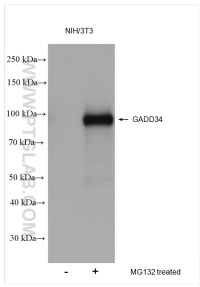
For technical support and original validation data for this product please contact:

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

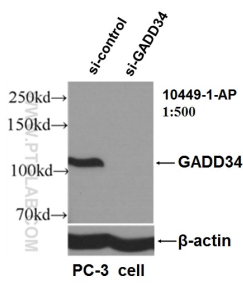
E: [proteintech@ptglab.com](mailto:proteintech@ptglab.com)  
W: [ptglab.com](http://ptglab.com)

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

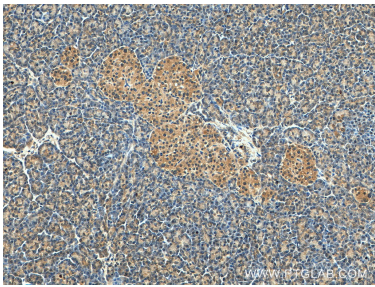
Selected Validation Data



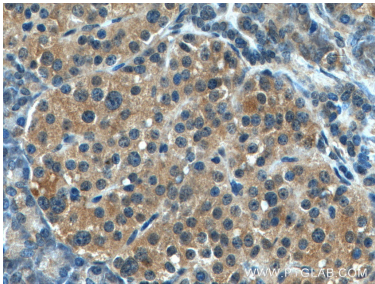
MG132 treated NIH/3T3 cells were subjected to SDS PAGE followed by western blot with 10449-1-AP (GADD34 antibody) at dilution of 1:3000 incubated at room temperature for 1.5 hours.



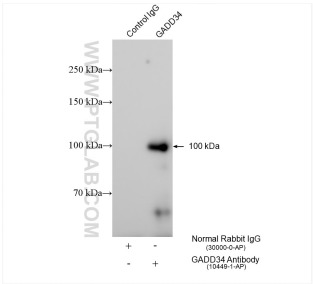
WB result of GADD34 antibody (10449-1-AP, 1:500) with si-Control and si-GADD34 transfected PC-3 cells.



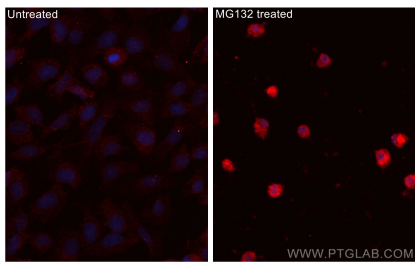
Immunohistochemical analysis of paraffin-embedded human pancreas tissue slide using 10449-1-AP (GADD34 antibody) at dilution of 1:200 (under 10x lens).



Immunohistochemical analysis of paraffin-embedded human pancreas tissue slide using 10449-1-AP (GADD34 antibody) at dilution of 1:200 (under 40x lens).



IP result of anti-GADD34 (IP:10449-1-AP, 4ug; Detection:10449-1-AP 1:800) with K-562 cells lysate 1360 ug.



Immunofluorescent analysis of (-20°C Ethanol) fixed MG132 treated U2OS cells using GADD34 antibody (10449-1-AP) at dilution of 1:400 and CoraLite®594-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-4).