

## FOXO3A Monoclonal antibody

Catalog Number: 66428-1-Ig

Featured Product

53 Publications

## Basic Information

Catalog Number:

66428-1-Ig

Concentration:

1000 µg/ml

Source:

Mouse

Isotype:

IgG2a

Immunogen Catalog Number:

AG1289

GenBank Accession Number:

BC021224

GeneID (NCBI):

2309

UNIPROT ID:

O43524

Full Name:

forkhead box O3

Calculated MW:

673 aa, 71 kDa

Observed MW:

85-90 kDa

Purification Method:

Protein A purification

CloneNo.:

1F12D11

Recommended Dilutions:

WB: 1:2000-1:10000

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

IHC: 1:250-1:1000

IF/ICC: 1:50-1:500

## Applications

Tested Applications:

WB, IHC, IF/ICC, IP, ELISA

Cited Applications:

WB, IHC, IF, IP, CoIP, ChIP

Species Specificity:

human, mouse, rat

Cited Species:

human, mouse, rat, zebrafish, macaque

**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, PC-12 cells, MCF-7 cells, HepG2 cells, Jurkat cells, K-562 cells, HSC-T6 cells, NIH/3T3 cells, Neuro-2a cells

**IP**: HEK-293 cells,

**IHC**: human breast cancer tissue, human lung cancer tissue, human ovary tumor tissue, human stomach cancer tissue

**IF/ICC**: HepG2 cells,

## Background Information

In mammalian cells, FoxO factors act as potent transcriptional activators that upregulate the expression of programs of genes involved in stress resistance, cell cycle arrest, differentiation, apoptosis, autophagy, and metabolism. FOXO3 has a key role in the maintenance of adult neural and hematopoietic stem cells. It also associates with extreme longevity in humans and regulates the homeostasis of adult stem cell pools in mammals, which may contribute to longevity. Phosphorylation inhibits FOXO3 nuclear translocation that is essential for its regulation and function. The calculated molecular weight of FOXO3 is 71 kDa, but some experiments analysis using a FOXO3a specific antibody showed the expression of a 90 kDa fulllength FOXO3a protein (Full) and a 40 kDa processed FOXO3a product (Short). 90 kDa FOXO3a protein is a phosphorylated via activation of PI3K (phosphatidylinositol 3-kinase) and Akt after INS stimulation, and translocate from the nucleus to the cytoplasm. (PMID: 19427386)

## Notable Publications

Author	Pubmed ID	Journal	Application
Jie Deng	34565300	Bioengineered	WB
Shen Zhang	32869942	J Cell Mol Med	WB
Hao Zhang	34803509	Int J Biol Sci	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

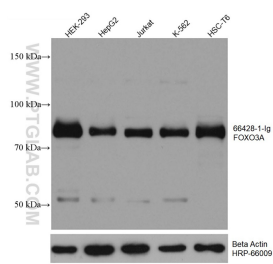
For technical support and original validation data for this product please contact:

T: 4006900926

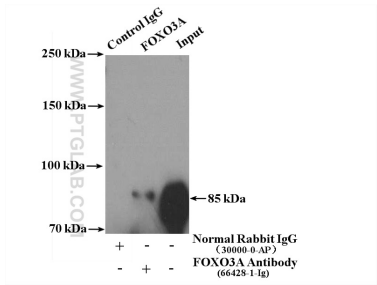
E: [Proteintech-CN@ptglab.com](mailto:Proteintech-CN@ptglab.com)W: [ptgcn.com](http://ptgcn.com)

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

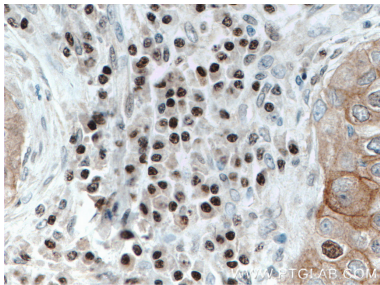
Selected Validation Data



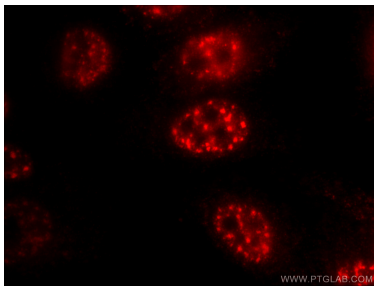
Various lysates were subjected to SDS PAGE followed by western blot with 66428-1-Ig (FOXO3A antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours. The membrane was stripped and reblotted with HRP-conjugated Beta Actin Monoclonal antibody (HRP-66009) as loading control.



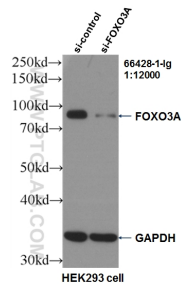
IP result of anti-FOXO3A (IP:66428-1-Ig, 4ug; Detection:66428-1-Ig 1:1000) with HEK-293 cells lysate 2200 ug.



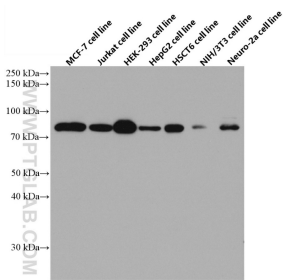
Immunohistochemical analysis of paraffin-embedded human breast cancer tissue slide using 66428-1-Ig (FOXO3A antibody) at dilution of 1:500 (under 40x lens. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0)).



Immunofluorescent analysis of (4% PFA ) fixed HepG2 cells using 66428-1-Ig(FOXO3A antibody) at dilution of 1:50 and Alexa Fluor 594-conjugated Goat Anti-mouse IgG(H+L).



WB result of FOXO3A antibody (66428-1-Ig, 1:12,000) with si-Control and si-FOXO3A transfected HEK293 cells.



Various lysates were subjected to SDS PAGE followed by western blot with 66428-1-Ig (FOXO3A antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours.