

FoxO3a (Phospho Ser321) Rabbit pAb

CatalogNo: YP1848 **Orthogonal Validated** 

Key Features

Host Species

- Rabbit

Reactivity

- Human, Mouse

Applications

- IHC, WB

MW

- 71kD (Observed)

Storage

Storage* -15°C to -25°C/1 year (Do not lower than -25°C)

Formulation Liquid in PBS containing 50% glycerol, and 0.02% sodium azide.

Recommended Dilution Ratios

WB 1:500-2000

IHC 1:50-200

Basic Information

Clonality Polyclonal

Immunogen Information

Immunogen Synthesized peptide derived from human FoxO3a (Phospho Ser321)

Specificity This antibody detects endogenous levels of FoxO3a (Phospho Ser321) Rabbit pAb at Human, Mouse. The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):TVsGR

| Target Information

Gene name FOXO3 FKHRL1 FOXO3A

Protein Name Forkhead box protein O3 (AF6q21 protein) (Forkhead in rhabdomyosarcoma-like 1)

Organism	Gene ID	UniProt ID
Human	2309 ;	O43524 ;
Mouse	56484 ;	Q9WVH4 ;

Cellular Localization

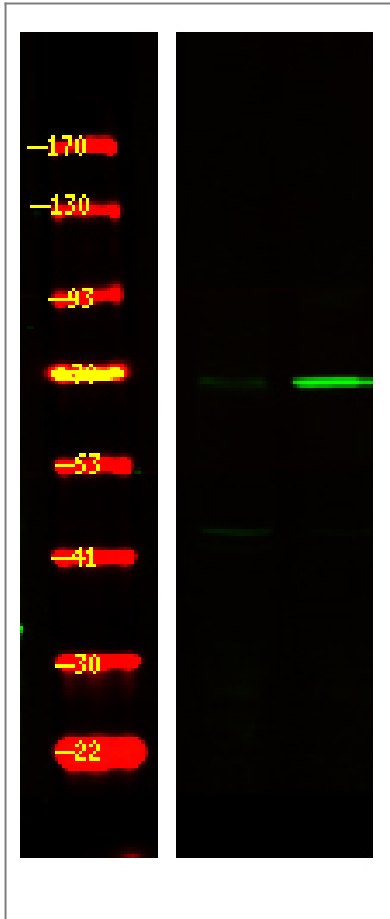
Cytoplasm , cytosol . Nucleus . Mitochondrion matrix . Mitochondrion outer membrane ; Peripheral membrane protein ; Cytoplasmic side . Retention in the cytoplasm contributes to its inactivation (PubMed:10102273 , PubMed:15084260 , PubMed:16751106) . Translocates to the nucleus upon oxidative stress and in the absence of survival factors (PubMed:10102273 , PubMed:16751106) . Translocates from the cytosol to the nucleus following dephosphorylation in response to autophagy-inducing stimuli (By similarity) . Translocates in a AMPK-dependent manner into the mitochondrion in response to metabolic stress (PubMed:23283301 , PubMed:29445193) . Serum deprivation increases localization to the nucleus , leading to activate expression of SOX9 and subsequent chondrogenesis (By similarity) . .

Tissue specificity Ubiquitous.

Function

Disease:A chromosomal aberration involving FOXO3 is found in secondary acute leukemias. Translocation t (6;11) (q21;q23) with MLL/HRX. ,Function:Transcriptional activator which triggers apoptosis in the absence of survival factors , including neuronal cell death upon oxidative stress. Recognizes and binds to the DNA sequence 5'-[AG]TAAA[TC]A-3'. ,PTM:In the presence of survival factors such as IGF-1 , phosphorylated on Thr-32 and Ser-253 by AKT1/PKB. This phosphorylated form then interacts with 14-3-3 proteins and is retained in the cytoplasm. Survival factor withdrawal induces dephosphorylation and promotes translocation to the nucleus where the dephosphorylated protein induces transcription of target genes and triggers apoptosis. Although AKT1/PKB doesn't appear to phosphorylate Ser-315 directly , it may activate other kinases that trigger phosphorylation at this residue. Phosphorylated by STK4 on Ser-209 upon oxidative stress , which leads to dissociation from YWHAB/14-3-3-beta and nuclear translocation. ,similarity:Contains 1 fork-head DNA-binding domain. ,subcellular location:Translocates to the nucleus upon oxidative stress and in the absence of survival factors. ,subunit:Interacts with YWHAB/14-3-3-beta and YWHAZ/14-3-3-zeta , which are required for cytosolic sequestration. Upon oxidative stress , interacts with STK4 , which disrupts interaction with YWHAB/14-3-3-beta and leads to nuclear translocation. ,tissue specificity:Ubiquitous. ,

| Validation Data



Western Blot analysis of 1 A549 cell, 2 LPS 100ng/mL 30min treated ,using primary antibody at 1:1000 dilution. Secondary antibody (catalog#:RS23920) was diluted at 1:10000

Contact information

Orders: order.cn@immunoway.com
Support: support.cn@immunoway.com
Telephone: 400-8787-807(China)
Website: <http://www.immunoway.com.cn>
Address: 2200 Ringwood Ave San Jose, CA 95131 USA



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FoxO3a (Phospho Ser321) Rabbit pAb

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