FoxO1/3/4 (Phospho Thr24/32) Rabbit pAb

CatalogNo: YP0651 Orthogonal Validated

Key Features

Host Species
- Rabbit

Reactivity
- Human,Mouse,Rat

Applications
- WB,IHC,IF,ELISA

MW
- 78kD (Observed)

Isotype
- IgG

Storage

Storage*	-15°C to -25°C/1 year (Do not lower than -25°C)
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Recommended Dilution Ratios

WB 1:500-1:2000
IHC 1:100-1:300
ELISA 1:5000
IF 1:50-200

Basic Information

Clonality	Polyclonal

Immunogen Information

Immunogen	The antiserum was produced against synthesized peptide derived from human FOXO1/3/4-pan around the phosphorylation site of Thr24/32. AA range:15-64

Specificity This antibody detects endogenous levels of FoxO1/3/4 only when phosphorylated at Human:T24/32, Mouse:T24/32, Rat:T24/32..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 When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports.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):SCtWP

Target Information

Gene name FOXO1/3/4

Protein Name Forkhead box protein O1/3/4

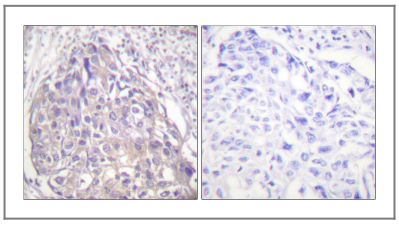
Organism	Gene ID	UniProt ID
Human	2308; 4303;	Q12778; O43524; P98177;
Mouse	56458; 56484; 54601;	
Rat	84482;	G3V7R4;

Cellular Localization Cytoplasm . Nucleus . Shuttles between the cytoplasm and nucleus. Largely nuclear in unstimulated cells (PubMed:11311120 , PubMed:12228231 , PubMed:19221179 , PubMed:21245099 , PubMed:20543840 , PubMed:25009184) . In osteoblasts , colocalizes with ATF4 and RUNX2 in the nucleus (By similarity) . Serum deprivation increases localization to the nucleus , leading to activate expression of SOX9 and subsequent chondrogenesis (By similarity) . Insulin-induced phosphorylation at Ser-256 by PKB/AKT1 leads , via stimulation of Thr-24 phosphorylation , to binding of 14-3-3 proteins and nuclear export to the cytoplasm where it is degraded by the ubiquitin-proteosomal pathway (PubMed:11237865 , PubMed:12228231) . Phosphorylation at Ser-249 by CDK1 disrupts binding of 14-3-3 proteins and promotes nuclear accumulation (PubMed:18356527) . Phosphorylation by NLK results in nuclear export (By similarity) . Translocates to the nucleus upon oxidative stress-induced phosphorylation at Ser-212 by STK4/MST1 (PubMed:19221179 , PubMed:21245099) . SGK1-mediated phosphorylation also results in nuclear translocation (By similarity) . Retained in the nucleus under stress stimuli including oxidative stress , nutrient deprivation or nitric oxide (By similarity) . Retained in the nucleus on methylation (By similarity) . PPIA/CYPA stimulates its nuclear accumulation (PubMed:31063815) . Deacetylation by SIRT6 , promotes its translocation into the cytoplasm (PubMed:25009184) . .

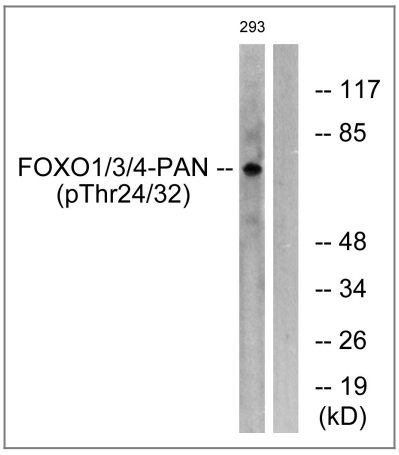
Tissue specificity Ubiquitous.

Function Disease:Chromosomal aberrations involving FOXO1 are a cause of rhabdomyosarcoma 2 (RMS2) [MIM:268220]; also known as alveolar rhabdomyosarcoma. Translocation (2;13) (q35;q14) with PAX3; translocation t (1;13) (p36;q14) with PAX7. The resulting protein is a transcriptional activator. ,Function:Transcription factor. ,PTM:Phosphorylated by AKT1; insulin-induced (By similarity) . IGF1 rapidly induces phosphorylation of Ser-256 , Thr-24 , and Ser-319. Phosphorylation of Ser-256 decreases DNA-binding activity and promotes the phosphorylation of Thr-24 , and Ser-319 , permitting phosphorylation of Ser-322 and Ser-325 , probably by CK1 , leading to nuclear exclusion and loss of function. Phosphorylation of Ser-329 is independent of IGF1 and leads to reduced function. Phosphorylated upon DNA damage , probably by ATM or ATR. ,similarity:Contains 1 fork-head DNA-binding domain. ,subcellular location:Shuttles between cytoplasm and nucleus. ,subunit:Interacts with LRPPRC. ,tissue specificity:Ubiquitous. ,

Validation Data



Immunohistochemistry analysis of paraffin-embedded human breast carcinoma, using FOXO1/3/4-pan (Phospho-Thr24/32) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from 293 cells treated with Serum 20% 15', using FOXO1/3/4-pan (Phospho-Thr24/32) Antibody. The lane on the right is blocked with the phospho peptide.

Contact information

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Please scan the QR code to access additional product information: **FoxO1/3/4 (Phospho Thr24/32) Rabbit pAb**

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