

**Anti-FOXO3 (pS253) Antibody**  
Rabbit polyclonal antibody to FOXO3 (pS253)  
Catalog # AP60671

## Specification

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### Anti-FOXO3 (pS253) Antibody - Product Information

Application	WB, IF
Primary Accession	<a href="#">O43524</a>
Other Accession	<a href="#">O9WVH4</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	71277

### Anti-FOXO3 (pS253) Antibody - Additional Information

Gene ID 2309

#### Other Names

FKHRL1; FOXO3A; Forkhead box protein O3; AF6q21 protein; Forkhead in rhabdomyosarcoma-like 1

#### Target/Specificity

Recognizes endogenous levels of FOXO3 (pS253) protein.

#### Dilution

WB~~WB (1/500 - 1/1000), IH (1/100 - 1/200), IF/IC (1/100 - 1/500), IP (1/10 - 1/100)  
IF~~WB (1/500 - 1/1000), IH (1/100 - 1/200), IF/IC (1/100 - 1/500), IP (1/10 - 1/100)

#### Format

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.09% (W/V) sodium azide.

#### Storage

Store at -20 °C. Stable for 12 months from date of receipt

### Anti-FOXO3 (pS253) Antibody - Protein Information

Name FOXO3 ([HGNC:3821](#))

#### Function

Transcriptional activator that recognizes and binds to the DNA sequence 5'-[AG]TAAA[TC]A-3' and regulates different processes, such as apoptosis and autophagy (PubMed: [10102273](http://www.uniprot.org/citations/10102273), PubMed: [16751106](http://www.uniprot.org/citations/16751106), PubMed: [21329882](http://www.uniprot.org/citations/21329882), PubMed: [30513302](http://www.uniprot.org/citations/30513302)). Acts as a positive regulator of autophagy in skeletal muscle: in starved cells, enters the nucleus following

dephosphorylation and binds the promoters of autophagy genes, such as GABARAP1L, MAP1LC3B and ATG12, thereby activating their expression, resulting in proteolysis of skeletal muscle proteins (By similarity). Triggers apoptosis in the absence of survival factors, including neuronal cell death upon oxidative stress (PubMed:<a href="http://www.uniprot.org/citations/10102273" target="\_blank">10102273</a>, PubMed:<a href="http://www.uniprot.org/citations/16751106" target="\_blank">16751106</a>). Participates in post-transcriptional regulation of MYC: following phosphorylation by MAPKAPK5, promotes induction of miR- 34b and miR-34c expression, 2 post-transcriptional regulators of MYC that bind to the 3'UTR of MYC transcript and prevent its translation (PubMed:<a href="http://www.uniprot.org/citations/21329882" target="\_blank">21329882</a>). In response to metabolic stress, translocates into the mitochondria where it promotes mtDNA transcription (PubMed:<a href="http://www.uniprot.org/citations/23283301" target="\_blank">23283301</a>). In response to metabolic stress, translocates into the mitochondria where it promotes mtDNA transcription. Also acts as a key regulator of chondrogenic commitment of skeletal progenitor cells in response to lipid availability: when lipids levels are low, translocates to the nucleus and promotes expression of SOX9, which induces chondrogenic commitment and suppresses fatty acid oxidation (By similarity). Also acts as a key regulator of regulatory T-cells (Treg) differentiation by activating expression of FOXP3 (PubMed:<a href="http://www.uniprot.org/citations/30513302" target="\_blank">30513302</a>).

#### Cellular Location

Cytoplasm, cytosol. Nucleus Mitochondrion matrix. Mitochondrion outer membrane; Peripheral membrane protein; Cytoplasmic side. Note=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). {ECO:0000250|UniProtKB:Q9WVH4, ECO:0000269|PubMed:10102273, ECO:0000269|PubMed:15084260, ECO:0000269|PubMed:16751106, ECO:0000269|PubMed:23283301, ECO:0000269|PubMed:29445193}

#### Tissue Location

Ubiquitous..

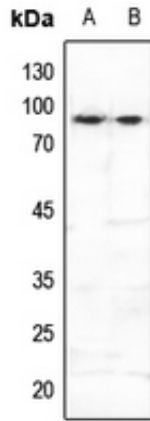
### Anti-FOXO3 (pS253) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

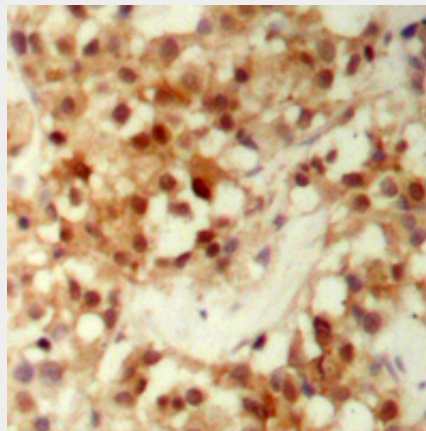
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Anti-FOXO3 (pS253) Antibody - Images

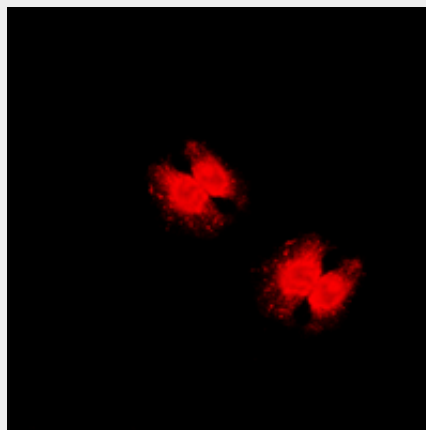




Western blot analysis of FOXO3 (pS253) expression in HCT116 (A), Raw264.7 (B) whole cell lysates.



Immunohistochemical analysis of FOXO3 (pS253) staining in human prostate cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of FOXO3 (pS253) staining in HeLa cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark.

### **Anti-FOXO3 (pS253) Antibody - Background**

KLH-conjugated synthetic peptide encompassing a sequence within the center region of human FOXO3. The exact sequence is proprietary.

#### **Anti-FOXO3 (pS253) Antibody - Citations**

- [FOXO in : Its Probable Involvement in Memory Consolidation](#)