

**Phospho-FoxO3a (S253) Antibody**  
**Rabbit mAb**  
**Catalog # AP90565****Specification****Phospho-FoxO3a (S253) Antibody - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">O43524</a>
Reactivity	Rat
Clonality	Monoclonal

**Other Names**

AF6q21 protein; FKHR2; FKHL1; Forkhead box O3; forkhead box O3A; Forkhead box protein O3A; Forkhead in rhabdomyosarcoma-like 1; FOXO3A;

Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	71277 Da

**Phospho-FoxO3a (S253) Antibody - Additional Information**

Dilution	WB~~1:1000 IHC~~1:100~500
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human FoxO3a
Description	This gene belongs to the forkhead family of transcription factors which are characterized by a distinct forkhead domain. This gene likely functions as a trigger for apoptosis through expression of genes necessary for cell death.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

**Phospho-FoxO3a (S253) 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:<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>, PubMed:<a href="http://www.uniprot.org/citations/21329882" target="\_blank">21329882</a>, PubMed:<a href="http://www.uniprot.org/citations/30513302" target="\_blank">30513302</a>). 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

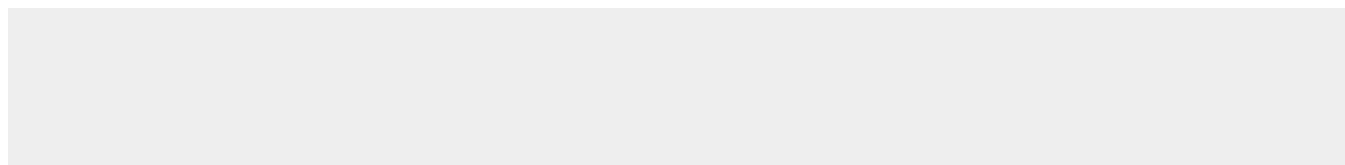
Ubiquitous..

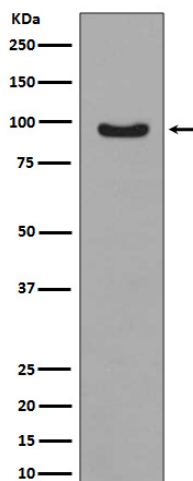
### Phospho-FoxO3a (S253) Antibody - Protocols

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](#)

### Phospho-FoxO3a (S253) Antibody - Images





Western blot analysis of Phospho-FoxO3a (S253) expression in MCF-7 cell lysate treated with IGF.