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Anti-FoxO3a Rabbit Monoclonal Antibody

Catalog # ABO13849

Product Information

Application	WB, IF, ICC
Primary Accession	O43524
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid
Description	Anti-FoxO3a Rabbit Monoclonal Antibody . Tested in WB, ICC/IF applications. This antibody reacts with Human, Mouse, Rat.

Additional Information

Gene ID	2309
Other Names	Forkhead box protein O3, AF6q21 protein, Forkhead in rhabdomyosarcoma-like 1, FOXO3 (HGNC:3821)
Calculated MW	71277
Application Details	WB 1:1000-1:2000 ICC/IF 1:50-1:200
Subcellular Localization	Cytoplasm, cytosol. Nucleus. Translocates to the nucleus upon oxidative stress and in the absence of survival factors.
Tissue Specificity	Ubiquitous..
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: HFD-6
Immunogen	A synthesized peptide derived from human FoxO3a
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

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, PubMed:16751106, PubMed:21329882, PubMed: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:10102273, PubMed:16751106). 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:21329882). In response to metabolic stress, translocates into the mitochondria where it promotes mtDNA transcription (PubMed:23283301). 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:30513302).

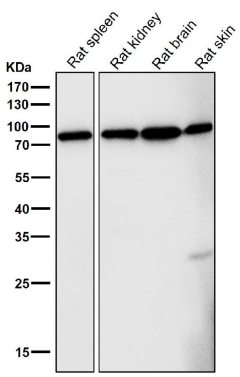
Cellular Location

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

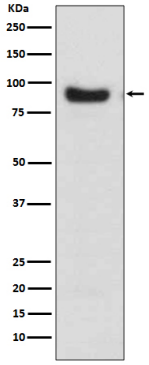
Ubiquitous..

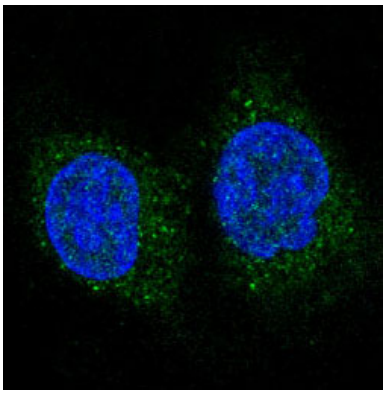
Images



All lanes use the Antibody at 1:1K dilution for 1 hour at room temperature.

Western blot analysis of FOXO3A expression in MCF-7 cell lysate.





Immunofluorescent analysis of Hela cells, using FoxO3a Antibody.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.