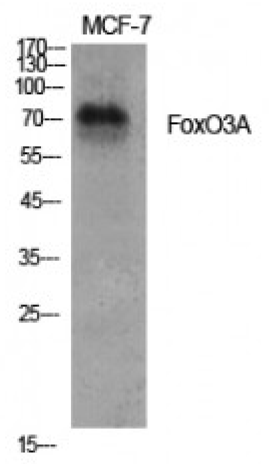
Anti-FoxO3A antibody



Description	Rabbit polyclonal to FoxO3A.

Model	STJ93128
Host	Rabbit
Reactivity	Human, Mouse, Rat
Applications	ELISA, IF, IHC, WB
Immunogen	Synthesized peptide derived from human FoxO3A around the non-phosphorylation site of S253.
Immunogen Region	190-270 aa
Gene ID	2309
Gene Symbol	FOXO3
Dilution range	WB 1:500-1:2000IHC 1:100-1:300IF 1:200-1:1000ELISA 1:20000
Specificity	FoxO3A Polyclonal Antibody detects endogenous levels of FoxO3A protein.
Tissue Specificity	Ubiquitous.
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Forkhead box protein O3 AF6q21 protein Forkhead in rhabdomyosarcoma-like 1
Molecular Weight	97/71 kDa
Clonality	Polyclonal

Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:3821OMIM:602681
Alternative Names	Forkhead box protein O3 AF6q21 protein Forkhead in rhabdomyosarcoma-like 1
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'. 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.
Cellular Localization	Cytoplasm, cytosol Nucleus. Retention in the cytoplasm contributes to its inactivation. Translocates to the nucleus upon oxidative stress and in the absence of survival factors.
Post-translational Modifications	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/MST1 on Ser-209 upon oxidative stress, which leads to dissociation from YWHAB/14-3-3-beta and nuclear translocation. Phosphorylated by PIM1. Phosphorylation by AMPK leads to the activation of transcriptional activity without affecting subcellular localization. Phosphorylation by MAPKAPK5 promotes nuclear localization and DNA-binding, leading to 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 . Phosphorylated by CHUK/IKKA and IKBKB/IKKB. TNF-induced inactivation of FOXO3 requires its phosphorylation at Ser-644 by IKBKB/IKKB which promotes FOXO3 retention in the cytoplasm, polyubiquitination and ubiquitin-mediated proteasomal degradation . May be dephosphorylated by calcineurin A on Ser-299 which abolishes FOXO3 transcriptional activity . Deacetylation by SIRT1 or SIRT2 stimulates interaction of FOXO3 with SKP2 and facilitates SCF(SKP2)-mediated FOXO3 ubiquitination and proteasomal degradation . Deacetylation by SIRT2 stimulates FOXO3-mediated transcriptional activity in response to oxidative stress . Heavily methylated by SET9 which decreases stability, while moderately increasing transcriptional activity. The main methylation site is Lys-271. Methylation doesn't affect subcellular location. Polyubiquitinated. Ubiquitinated by a SCF complex containing SKP2, leading to proteasomal degradation.