ARG51655
anti-FOXO3A phospho (Ser253) antibody

Package: 100 µl, 50 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes FOXO3A phospho (Ser253)
Tested Reactivity	Hu, Ms, Rat
Tested Application	ICC/IF, IHC-P, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	FOXO3A
Species	Human
Immunogen	Peptide sequence around phosphorylation site of serine 253(A-V-S(p)-M-D) derived from Human FOXO3A.
Conjugation	Un-conjugated
Alternate Names	FKHRL1; AF6q21; AF6q21 protein; Forkhead box protein O3; Forkhead in rhabdomyosarcoma-like 1; FOXO2; FOXO3A; FKHRL1P2

Application Instructions

Application table

Application	Dilution
ICC/IF	1:100 - 1:200
IHC-P	1:50 - 1:100
WB	1:500 - 1:1000

Application Note: * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

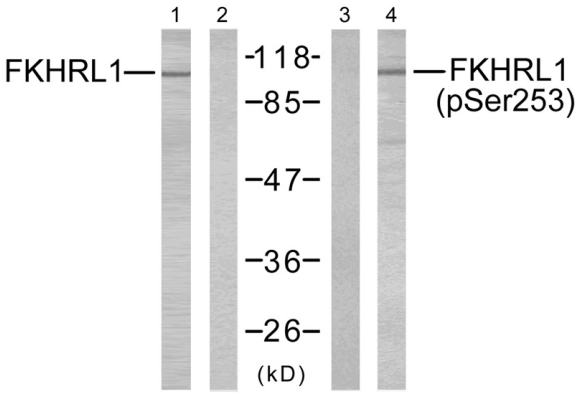
Form	Liquid
Purification	Antibodies were produced by immunizing rabbits with KLH-conjugated synthetic phosphopeptide. Antibodies were purified by affinity-chromatography using epitope-specific phosphopeptide. In addition, non-phospho specific antibodies were removed by chromatogramphy using non-phosphopeptide.
Buffer	PBS (without Mg2+ and Ca2+, pH 7.4), 150mM NaCl, 0.02% Sodium azide and 50% Glycerol.
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot

	and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

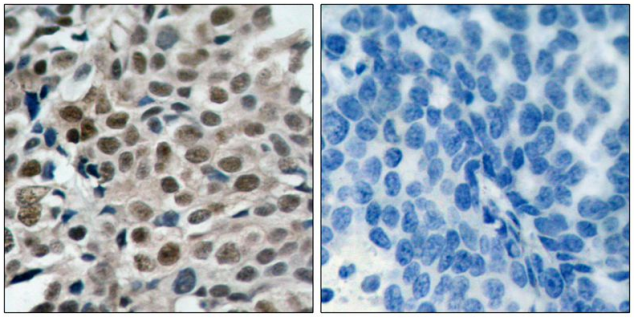
Database links	GeneID: 2309 Human GeneID: 56484 Mouse Swiss-port # O43524 Human Swiss-port # Q9WVH4 Mouse
Gene Symbol	FOXO3
Gene Full Name	forkhead box O3
Background	Transcriptional activator which triggers apoptosis in the absence of survival factors, including neuronal cell death upon oxidative stress. 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.
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. [UniProt]
Research Area	Gene Regulation antibody
Calculated Mw	71 kDa
PTM	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 (PubMed:10102273, PubMed:11154281, PubMed:16751106, PubMed:17711846, PubMed:18593906, PubMed:21329882). 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 (PubMed:15084260). May be dephosphorylated by calcineurin A on Ser-299 which abolishes FOXO3 transcriptional activity (By similarity). Deacetylation by SIRT1 or SIRT2 stimulates interaction of FOXO3 with SKP2 and facilitates SCF(SKP2)-mediated FOXO3 ubiquitination and proteasomal degradation (PubMed:21841822). Deacetylation by SIRT2 stimulates FOXO3-mediated transcriptional activity in response to oxidative stress (By similarity). 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.

Images



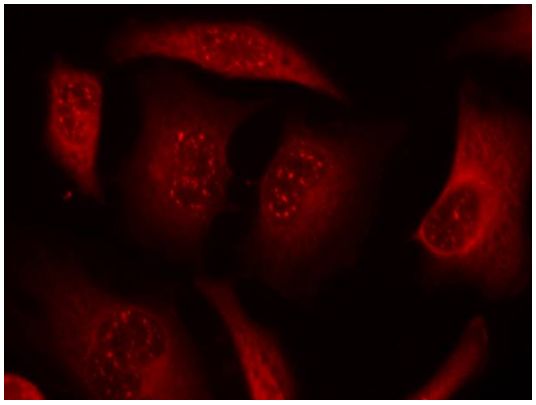
ARG51655 anti-FOXO3A phospho (Ser253) antibody WB image

Western blot: Extracts from NIH/3T3 cells stained with FKHRL1 antibody (Lane 1 and 2) and ARG51655 anti-FOXO3A phospho (Ser253) antibody (Lane 3 and 4).



ARG51655 anti-FOXO3A phospho (Ser253) antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human breast carcinoma tissue stained with ARG51655 anti-FOXO3A phospho (Ser253) antibody.



ARG51655 anti-FOXO3A phospho (Ser253) antibody ICC/IF image

Immunofluorescence: methanol-fixed HeLa cells stained with ARG51655 anti-FOXO3A phospho (Ser253) antibody (Red).