

Rabbit FKHR Polyclonal Antibody | anti-FKHR antibody

Phospho-FKHR (Ser319) Antibody

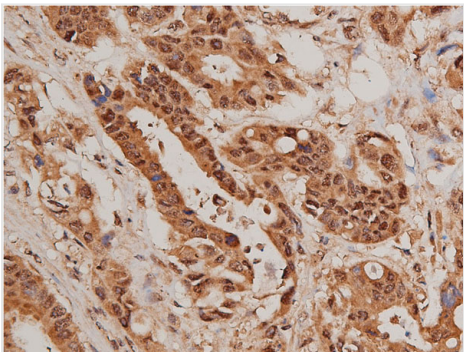
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA31069	Rabbit	Human, Mouse, Rat	Western Blot, Immunohistochemistry, Immunofluorescence, Immunocytochemistry, ELISA

PRODUCT SYNONYMS

FKHR; Polyclonal Antibody; Phospho-FKHR (Ser319) Antibody; FKH 1; FKH1; Forkhead (Drosophila) homolog 1 (rhabdomyosarcoma); Forkhead box O1; Forkhead box protein O1; Forkhead box protein O1A; Forkhead in rhabdomyosarcoma; Forkhead; Drosophila; homolog of; in rhabdomyosarcoma; FoxO transcription factor; foxo1; FOXO1_HUMAN; FOXO1A; OTTHUMP00000018301; anti-FKHR antibody

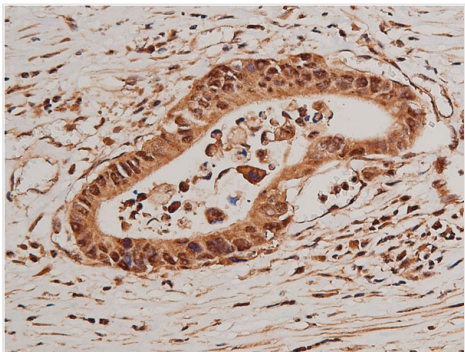
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	Phospho-FKHR (Ser319) antibody detects endogenous levels of FKHR only when phosphorylated at Serine 319
Purity/Purification	From purified rabbit serum by affinity purification via sequential chromatography on phospho- and non-phospho-peptide affinity columns.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	655
Applicable Applications for anti-FKHR antibody	WB (Western Blot), IHC (Immunohistochemistry), IF (Immunofluorescence), ICC (Immunocytochemistry), ELISA
Application Notes	WB: 1:500-1:2000 IHC: 1:50-1:200 IF/ICC: 1:100-1:500
Immunogen	A synthesized peptide derived from human FKHR around the phosphorylation site of Serine 319
Subcellular Location	Cytoplasm. Nucleus. Shuttles between cytoplasm and nucleus.
Tissue Specificity	Ubiquitous.
Predicted Cross Reactivity	Pig, Bovine, Dog, Chicken, Xenopus
Similarity	Pig (100%), Bovine (100%), Dog (100%), Chicken (100%), Xenopus (100%)
Conjugation	Unconjugated
Epitope	Phospho Ser319
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



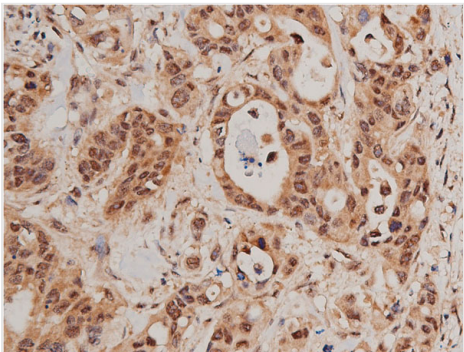
IHC (Immunohistochemistry)

AAA31069 at 1/50 staining human colon cancer tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



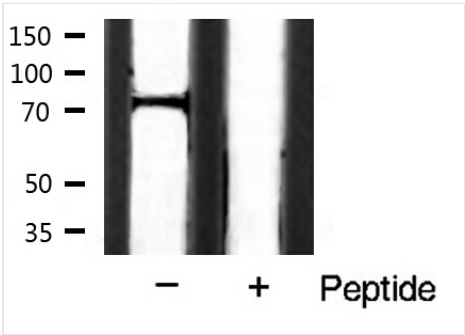
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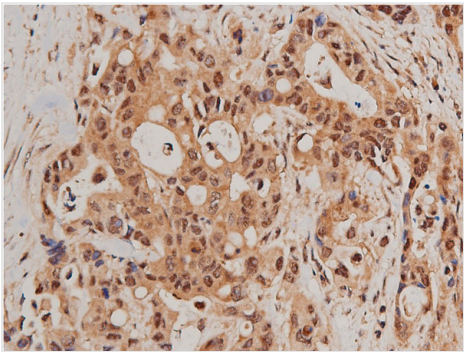
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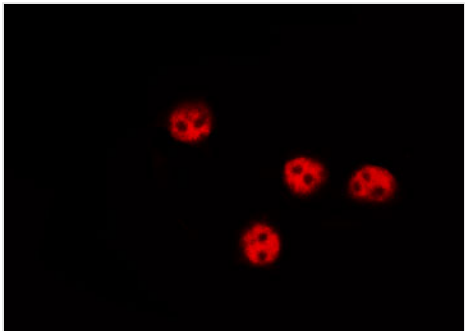
WB (Western Blot)

Western blot analysis of FKHR phosphorylation expression in mouse muscle tissue lysates, The lane on the right is treated with the antigen-specific peptide.



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IF (Immunofluorescence)

AAA31069 staining HeLa by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-FKHR antibody	Description: This gene belongs to the forkhead family of transcription factors which are characterized by a distinct forkhead domain. The specific function of this gene has not yet been determined; however, it may play a role in myogenic growth and differentiation. Function: Transcription factor that is the main target of insulin signaling and regulates metabolic homeostasis in response to oxidative stress. Binds to the insulin response element (IRE) with consensus sequence 5'-TT[G/A]TTTGG-3' and the related Daf-16 family binding element (DBE) with consensus sequence 5'-TT[G/A]TTTAC-3'. Activity suppressed by insulin. Main regulator of redox balance and osteoblast numbers and controls bone mass. Orchestrates the endocrine function of the skeleton in regulating glucose metabolism. Acts synergistically with ATF4 to suppress osteocalcin/BGLAP activity, increasing glucose levels and triggering glucose intolerance and insulin insensitivity. Also suppresses the transcriptional activity of RUNX2, an upstream activator of osteocalcin/BGLAP. In hepatocytes, promotes gluconeogenesis by acting together with PPARGC1A and CEBPA to activate the expression of genes such as IGFBP1, G6PC and PCK1. Important regulator of cell death acting downstream of CDK1, PKB/AKT1 and STK4/MST1. Promotes neural cell death. Mediates insulin action on adipose tissue. Regulates the expression of adipogenic genes such as PPARG during preadipocyte differentiation and, adipocyte size and adipose tissue-specific gene expression in response to excessive calorie intake. Regulates the transcriptional activity of GADD45A and repair of nitric oxide-damaged DNA in beta-cells. Required for the autophagic cell death induction in response to starvation or oxidative stress in a transcription-independent manner. Mediates the function of MLIP in cardiomyocytes hypertrophy and cardiac remodeling (By similarity). Subunit Structure: Interacts with LRPPRC. Interacts with RUNX2; the interaction inhibits RUNX2 transcriptional activity and mediates the IGF1/insulin-dependent BGLAP expression in osteoblasts Interacts with PPP2R1A; the interaction regulates the dephosphorylation of FOXO1 at Thr-24 and Ser-256 leading to its nuclear import. Interacts (acetylated form) with PPARG. Interacts with XBP1 isoform 2; this interaction is direct and leads to FOXO1 ubiquitination and degradation via the proteasome pathway (By similarity). Interacts with NLK. Interacts with SIRT1; the interaction results in the deacetylation of FOXO1 leading to activation of FOXO1-mediated transcription of genes involved in DNA repair and stress resistance. Binds to CDK1. Interacts with the 14-3-3 proteins, YWHAG and YWHAZ; the interactions require insulin-stimulated phosphorylation on Thr-24, promote nuclear exit and loss of transcriptional activity. Interacts with SKP2; the interaction ubiquitinates FOXO1 leading to its proteosomal degradation. The interaction requires the presence of KRIT1. Interacts (via the C-terminal half) with ATF4 (via its DNA-binding domain); the interaction occurs in osteoblasts, regulates glucose homeostasis via suppression of beta-cell proliferation and subsequent decrease in insulin production. Interacts with PRMT1; the interaction methylates FOXO1, prevents PKB/AKT1 phosphorylation and retains FOXO1 in the nucleus. Interacts with EP300 and CREBBP; the interactions acetylate FOXO1. Interacts with SIRT2; the interaction is disrupted in response to oxidative stress or serum deprivation, leading to increased level of acetylated FOXO1, which promotes stress-induced autophagy by stimulating E1-like activating enzyme ATG7. Interacts (acetylated form) with ATG7; the interaction is increased in response to oxidative stress or serum deprivation and promotes the autophagic process leading to cell death. Interacts (via the Fork-head domain) with CEBPA; the interaction increases when FOXO1 is deacetylated. Interacts with WDFY2. Forms a complex with WDFY2 and AKT1 (By similarity). Post-translational Modifications: Phosphorylation by NLK promotes nuclear export and inhibits the transcriptional activity. In response to growth factors, phosphorylation on Thr-24, Ser-256 and Ser-322 by PKB/AKT1 promotes nuclear export and inactivation of transactivational activity. Phosphorylation on Thr-24 is required for binding 14-3-3 proteins. Phosphorylation of Ser-256 decreases DNA-binding activity and promotes the phosphorylation of Thr-24 and Ser-319, permitting phosphorylation of Ser-322 and Ser-325, probably by CDK1, leading to nuclear exclusion and loss of function. Stress signals, such as response to oxygen or nitric oxide, attenuate the PKB/AKT1-mediated phosphorylation leading to nuclear retention. Phosphorylation of Ser-329 is independent of IGF1 and leads to reduced function. Dephosphorylated on Thr-24 and Ser-256 by PP2A in beta-cells under oxidative stress leading to nuclear retention (By similarity). Phosphorylation of Ser-249 by CDK1 disrupts binding of 14-3-3 proteins leading to nuclear accumulation and has no effect on DNA-binding nor transcriptional activity. Phosphorylation by STK4/MST1 on Ser-212, upon oxidative stress, inhibits binding to 14-3-3 proteins and nuclear export. Acetylated. Acetylation at Lys-262, Lys-265 and Lys-274 are necessary for autophagic cell death induction. Deacetylated by SIRT2 in response to oxidative stress or serum deprivation, thereby negatively regulating FOXO1-mediated autophagic cell death. Ubiquitinated by SRT2. Ubiquitination leads to proteasomal degradation. Methylation inhibits AKT1-mediated phosphorylation at Ser-256 and is increased by oxidative stress. Once in the nucleus, acetylated by CREBBP/EP300. Acetylation diminishes the interaction with target DNA and attenuates the transcriptional activity. It increases the phosphorylation at Ser-256. Deacetylation by SIRT1 results in reactivation of the transcriptional activity. Oxidative stress by hydrogen peroxide treatment appears to promote deacetylation and uncoupling of insulin-induced phosphorylation. By contrast, resveratrol acts independently of acetylation.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	9257222
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NCBI GeneID	2308
NCBI Accession #	NP_002006.2
NCBI GenBank Nucleotide #	NM_002015.3
UniProt Accession #	Q12778; O43523; Q5VYC7; Q6NSK6
Molecular Weight	Observed: 69 kDa Predicted: 70 kDa
NCBI Official Full Name	forkhead box protein O1
NCBI Official Synonym Full Names	forkhead box O1
NCBI Official Symbol	FOXO1
NCBI Official Synonym Symbols	FKH1; FKHR; FOXO1A
NCBI Protein Information	forkhead box protein O1
UniProt Protein Name	Forkhead box protein O1
UniProt Gene Name	FOXO1
UniProt Synonym Gene Names	FKHR; FOXO1A

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/polyclonal/fkhr-antibody-western-blot-immunohistochemistry-immunofluorescence-immunocytochemistry-elisa/31069>