

Rabbit FoxO1a Monoclonal Antibody | anti-FoxO1a antibody

Anti-FoxO1a Rabbit Monoclonal Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA46862	Rabbit	Human, Mouse, Rat	Western Blot, Immunocytochemistry, Immunohistochemistry, Immunofluorescence

PRODUCT SYNONYMS

FoxO1a; Monoclonal Antibody; Anti-FoxO1a Rabbit Monoclonal Antibody; Forkhead box protein O1; Forkhead box protein O1A; Forkhead in rhabdomyosarcoma; FOXO1; FKHR; FOXO1A; anti-FoxO1a antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Monoclonal
Purity/Purification	Affinity-chromatography
Form/Format	Liquid
Sequence Length	655
Applicable Applications for anti-FoxO1a antibody	WB (Western Blot), ICC (Immunocytochemistry), IHC (Immunohistochemistry), IF (Immunofluorescence)
Immunogen	A synthesized peptide derived from human FoxO1a
Subcellular Localization	Cytoplasm. Nucleus. Shuttles between the cytoplasm and nucleus. Largely nuclear in unstimulated cells. In osteoblasts, colocalizes with ATF4 and RUNX2 in the nucleus (By similarity). Insulin-induced phosphorylation at Ser-256 by PKB/AKT1 leads, via stimulation of Thr-24 phosphorylation, to binding of 14-3-3 proteins and nuclear export to the cytoplasm where it is degraded by the ubiquitin-proteosomal pathway. Phosphorylation at Ser-249 by CDK1 disrupts binding of 14-3-3 proteins and promotes nuclear accumulation. Phosphorylation by NLK results in nuclear export. Translocates to the nucleus upon oxidative stress-induced phosphorylation at Ser-212 by STK4/MST1. SGK1-mediated phosphorylation also results in nuclear translocation. Retained in the nucleus under stress stimuli including oxidative stress, nutrient deprivation or nitric oxide. Retained in the nucleus on methylation.
Tissue Specificity	Ubiquitous.
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.

IMAGES



WB (Western Blot)

Western blot analysis of FoxO1a expression in (1)C6 cell lysate; (2)PC-12 cell lysate (AAA46862).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-FOXO1 monoclonal antibody overnight at 4 degree C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for FOXO1



IHC (Immunohistochemistry)

Immunohistochemical analysis of paraffin-embedded human brain carcinoma, using FoxO1a Antibody(AAA46862)FOXO1 was detected in paraffin-embedded tissue section. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-FOXO1 Antibody (AAA46862)overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

ADDITIONAL INFORMATION

Related Product Information for anti-FoxO1a antibody	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]TTTGTG-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 SKT4/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.
Product Categories/Family for anti-FoxO1a antibody	Cell Biology; Apoptosis; Intracellular; Associated Proteins; Epigenetics and Nuclear Signaling; Nuclear Signaling Pathways; Nuclear Receptors; Co-Activators/Co-Repressors; Transcription; Domain Families; Forkhead Box; FOXO; Cardiovascular/Immune; Hypoxia

NCBI AND UNIPROT INFORMATION

NCBI GI #	9257222
NCBI GeneID	2308
NCBI Accession #	NP_002006.2
NCBI GenBank Nucleotide #	NM_002015.3
UniProt Accession #	Q12778; O43523; Q5VYC7; Q6NSK6
Molecular Weight	69662 MW
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

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://stage.aaabiotech.com/monoclonal/foxo1a-antibody-western-blot-immunocytochemistry-immunohistochemistry-immunofluorescence-elisa/46862>