SunLong Biotech Co.,LTD
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Rabbit Anti-FOXO3A antibody

SL22765R

Product Name	FOXO3A
Chinese Name	叉头蛋白 O3A 抗体
Alias	AF6q21; AF6q21 protein; DKFZp781A0677; FKHR2; FKHRL 1; FKHRL1; FKHRL1P2; Forkhead (Drosophila) homolog (rhabdomyosarcoma) like 1; Forkhead box O3A; Forkhead box protein O3A; Forkhead Drosophila homolog of in rhabdomyosarcoma like 1; Forkhead in rhabdomyosarcoma like 1; FOX O3A; FOXO2; MGC12739; MGC31925; FOXO3_HUMAN
Research Area	Tumour immunology transcriptional regulatory factor
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human, (predicted: Mouse, Rat, Pig, Cow, Sheep,)
Applications	Flow-Cyt=1ug/Test not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	74kDa
Cellular localization	The nucleus cytoplasmic
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human FOXO3A: 521-620/673
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
PubMed	PubMed

This gene belongs to the forkhead family of transcription factors which are characterized by a distinct forkhead domain. This gene likely functions as a trigger for apoptosis through expression of genes necessary for cell death. Translocation of this gene with the MLL gene is associated with secondary acute leukemia. Alternatively spliced transcript variants encoding the same protein have been observed. [provided by RefSeq, Jul 2008]

Product Detail

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.

Subunit:
Interacts with YWHAB/14-3-3-beta and YWHAZ/14-3-3-zeta, which are required for cytosolic sequestration. Upon oxidative stress, interacts with STK4/MST1, which disrupts interaction with YWHAB/14-3-3-beta and leads to nuclear translocation. Interacts with PIM1.

Subcellular Location:
Cytoplasm, cytosol. Nucleus. Note=Translocates to the nucleus upon oxidative stress and in the absence of survival factors.

Tissue Specificity:
Ubiquitous.

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.

DISEASE:
Note=A chromosomal aberration involving FOXO3 is found in secondary acute leukemias. Translocation t(6;11)(q21;q23) with MLL/HRX.

Similarity:
Contains 1 fork-head DNA-binding domain.

SWISS:
O43524

Gene ID:
2309

Database links:

Entrez Gene: 2309 Human

Entrez Gene: 56484 Mouse

Entrez Gene: 294515 Rat

Omim: 602681 Human

SwissProt: O43524 Human

SwissProt: Q9WVH4 Mouse

Unigene: 220950 Human

Unigene: 338613 Mouse

Unigene: 24593 Rat

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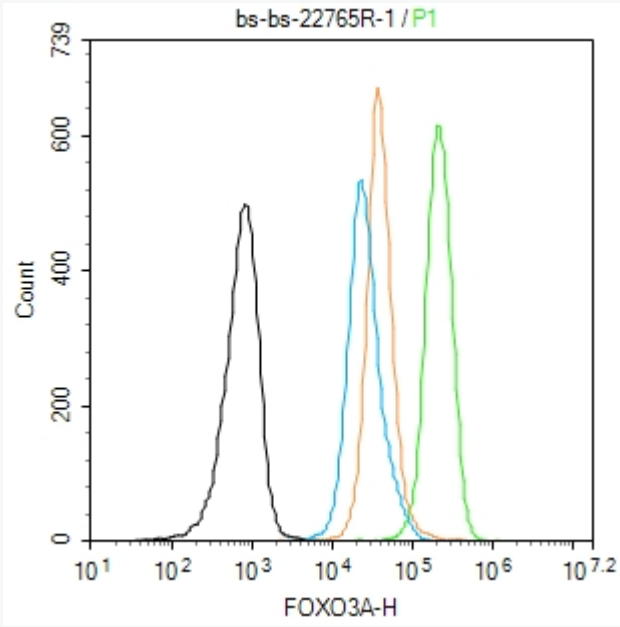
Product Picture



Blank control:A431.

Primary Antibody (green line): Rabbit Anti-FOXO3A antibody (SL22765R)

Dilution: 1µg /10^6 cells;

Isotype Control Antibody (orange line): Rabbit IgG .

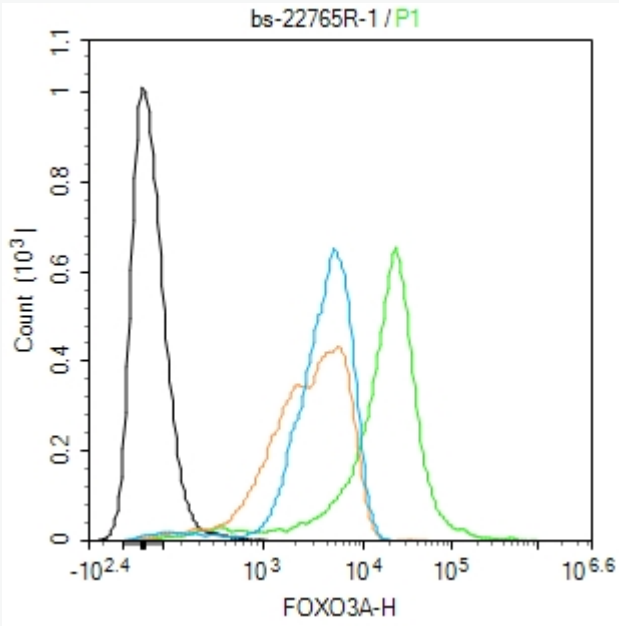
Secondary Antibody : Goat anti-rabbit IgG-FITC

Dilution: 0.5µg /test.

Protocol

The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 90% ice-cold methanol for 20 min at-20℃. The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used

for 40 min at room temperature. Acquisition of 20,000 events was performed.



Blank control:THP-1.

Primary Antibody (green line): Rabbit Anti-FOXO3A antibody (SL22765R)

Dilution: 1μg /10^6 cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody : Goat anti-rabbit IgG-FITC

Dilution: 0.5μg /test.

Protocol

The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 90% ice-cold methanol for 20 min at-20℃. The cells

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were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.