



## Rabbit Anti-Phospho-FoxO1 (Ser256) antibody

SL3142R

<b>Product Name:</b>	Phospho-FoxO1 (Ser256)
<b>Chinese Name:</b>	磷酸化叉头蛋白家族1抗体
<b>Alias:</b>	FOXO1A (phospho S256); p-FOXO1A (phospho S256); FKHR(Phospho-Ser256); Forkhead box protein O1; Afxh; AI876417; FKHR; Fkhr1; Foxo1a; Forkhead; FKH 1; FKH1; FKH1; FKHR; FKHR; Forkhead (Drosophila) homolog 1 (rhabdomyosarcoma); 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; FOXO1; FOXO1; FOXO1_HUMAN; FOXO1A.
<b>Organism Species:</b>	Rabbit
<b>Clonality:</b>	Polyclonal
<b>React Species:</b>	Human,Mouse,Rat,Chicken,Dog,Pig,Cow,Horse,
<b>Applications:</b>	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800Flow-Cyt=1µg /TestIF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
<b>Molecular weight:</b>	72kDa
<b>Cellular localization:</b>	The nucleuscytoplasmic
<b>Form:</b>	Lyophilized or Liquid
<b>Concentration:</b>	1mg/ml
<b>immunogen:</b>	KLH conjugated Synthesised phosphopeptide derived from human FOXO1 around the phosphorylation site of Ser256:AA(p-S)MD
<b>Lsotype:</b>	IgG
<b>Purification:</b>	affinity purified by Protein A
<b>Storage Buffer:</b>	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
<b>Storage:</b>	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

**PubMed:**[PubMed](#)

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. Translocation of this gene with PAX3 has been associated with alveolar rhabdomyosarcoma. [provided by RefSeq].

**Function:**

Transcription factor which acts as a regulator of cell responses to oxidative stress. In the presence of KIRT1, mediates down-regulation of cyclin D1 and up-regulation of CDKN1B levels which are required for cell transition from proliferative growth to quiescence. Triggers death of postmitotic neurons when phosphorylated by CDK1. Activates transcription of PMAIP1.

**Subunit:**

Interacts with LRPPRC. Interacts with SIRT1 and this interaction requires the presence of KRIT1. Interacts with NLK. Binds to CDK1 and 14-3-3 proteins.

**Subcellular Location:**

Cytoplasm. Nucleus. Note=Shuttles between cytoplasm and nucleus. Translocates to the nucleus upon oxidative stress induced phosphorylation at Ser-212 by STK4/MST1. Translocates to the nucleus upon phosphorylation of Thr-24, Ser-256 and Ser-322 by SGK1.

**Product Detail:****Tissue Specificity:**

Ubiquitous.

**Post-translational modifications:**

Phosphorylated by AKT1; insulin-induced. Phosphorylated by NLK, which inhibits transcriptional activity and promotes nuclear export (By similarity). IGF1 rapidly induces phosphorylation of Ser-256, Thr-24, and Ser-319. 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 CK1, leading to nuclear exclusion and loss of function. Phosphorylation of Ser-329 is independent of IGF1 and leads to reduced function. Phosphorylated upon DNA damage, probably by ATM or ATR. Phosphorylation of Ser-249 by CDK1 disrupts 14-3-3 proteins binding and thereby promotes FOXO1 nuclear accumulation and subsequent transcription activation and cell death. Phosphorylated by STK4/MST1 on Ser-212 upon oxidative stress. Phosphorylated on Thr-24, Ser-256 and Ser-322 by SGK1 resulting in its translocation from the nucleus to the cytoplasm.

**DISEASE:**

Defects in FOXO1 are a cause of rhabdomyosarcoma type 2 (RMS2) [MIM:268220]. It is a form of rhabdomyosarcoma, a highly malignant tumor of striated muscle derived from primitive mesenchymal cells and exhibiting differentiation along rhabdomyoblastic lines. Rhabdomyosarcoma is one of the most frequently occurring soft tissue sarcomas

and the most common in children. It occurs in four forms: alveolar, pleomorphic, embryonal and botryoidal rhabdomyosarcomas. Note=Chromosomal aberrations involving FOXO1 are found in rhabdomyosarcoma. Translocation (2;13)(q35;q14) with PAX3; translocation t(1;13)(p36;q14) with PAX7. The resulting protein is a transcriptional activator.

**Similarity:**

Contains 1 fork-head DNA-binding domain.

**SWISS:**

Q12778

**Gene ID:**

2308

**Database links:**

[Entrez Gene: 2308](#)Human

[Entrez Gene: 56458](#)Mouse

[Entrez Gene: 84482](#)Rat

[Omim: 136533](#)Human

[SwissProt: Q12778](#)Human

[SwissProt: Q9R1E0](#)Mouse

[SwissProt: G3V7R4](#)Rat

[Unigene: 370666](#)Human

[Unigene: 29891](#)Mouse

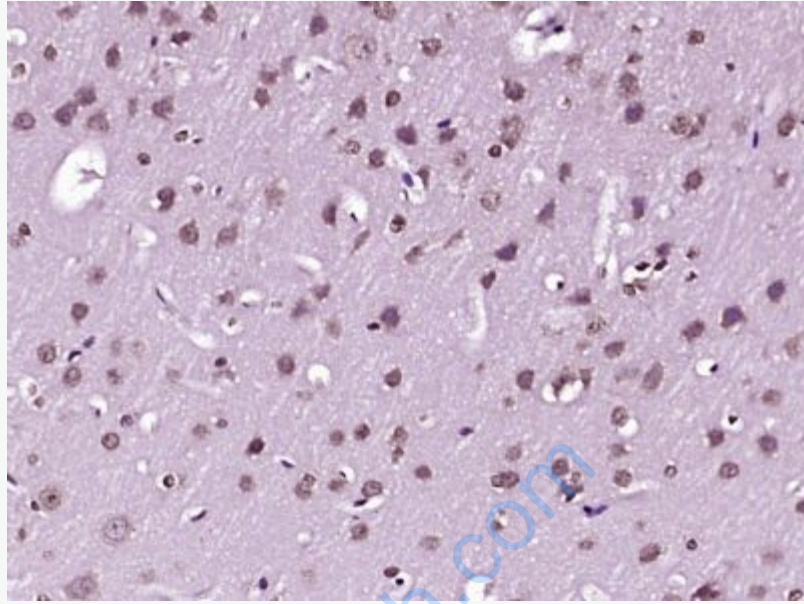
[Unigene: 116108](#)Rat

**Important Note:**

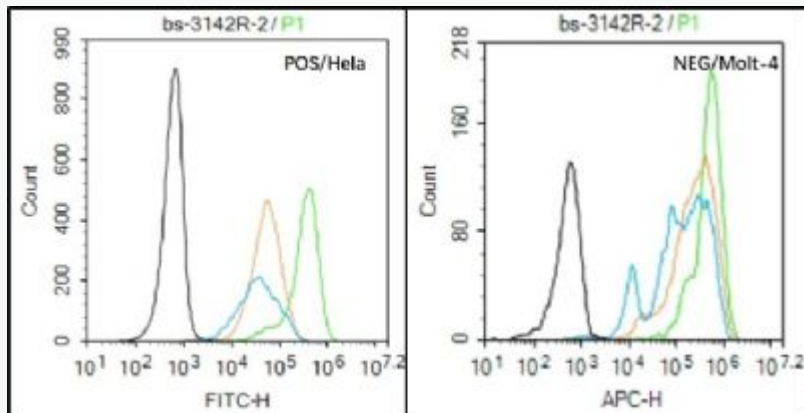
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FoxO家族蛋白是一类转录因子, 通过结合到下游基因启动子而激活一系列重要基因来调节细胞的重要生命过程。FoxO1(叉头蛋白家族1)是FOXO家族的重要一员, 该蛋白主要调节细胞衰老、细胞周期、代谢及抗Tumour的作用。

FoxO1是诱导Autophagy的关键蛋白, 其抗癌作用与其诱导自噬功能密切相关。



Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Phospho-FoxO1 (Ser256)) Polyclonal Antibody, Unconjugated (SL3142R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.



Black line : Positive blank control (Hela); Negative blank control (Molt4)

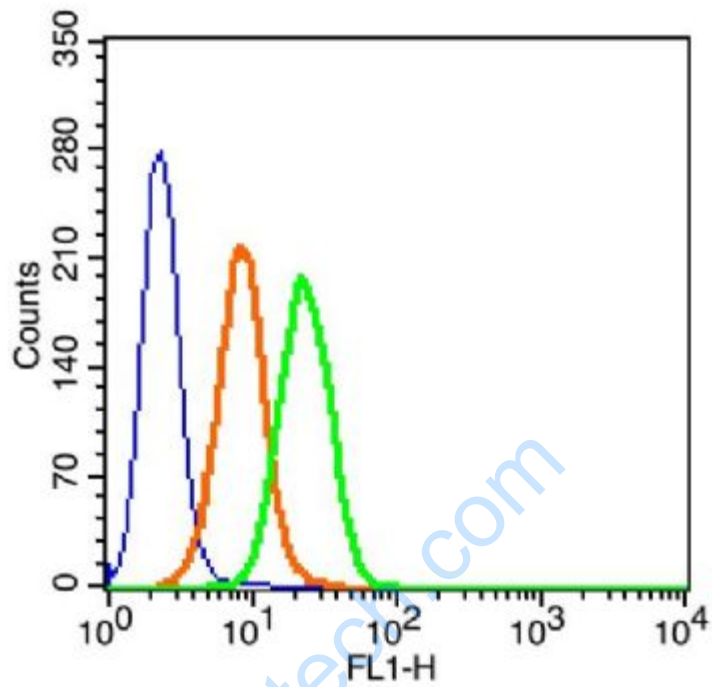
Picture:

Green line : Primary Antibody (Rabbit Anti-Phospho-FoxO1 (Ser256) antibody (SL3142R) )

Orange line : Isotype Control Antibody (Rabbit IgG) .

Blue line : Secondary Antibody (Goat anti-rabbit IgG-AF488)

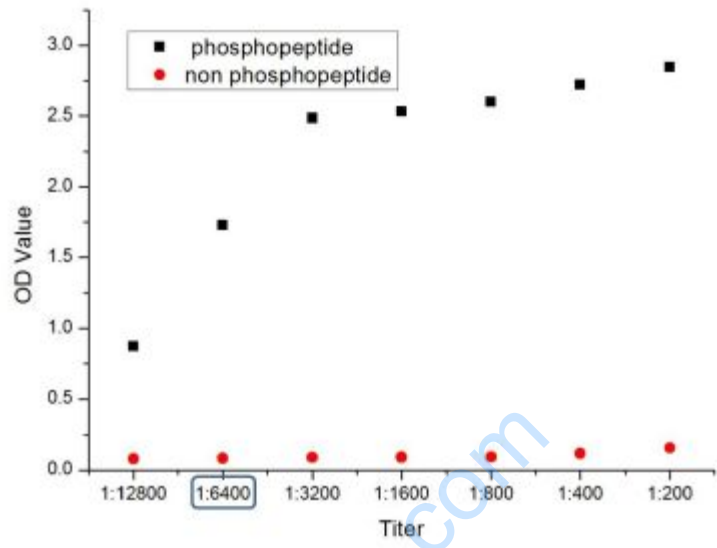
Hela (Positive) and Molt4 (Negative control) cells (black) were fixed with 4% PFA for 10min at room temperature, permeabilized with 90% ice-cold methanol for 20 min at -20°C, and incubated in 5% BSA blocking buffer for 30 min at room temperature. Cells were then stained with Phospho-FoxO1 (Ser256) Antibody (SL3142R) at 1:50 dilution in blocking buffer and incubated for 30 min at room temperature, washed twice with 2% BSA in PBS, followed by secondary antibody (blue) incubation for 40 min at room temperature. Acquisitions of 20,000 events were performed. Cells stained with primary antibody (green), and isotype control (orange).



Blank control(blue): HeLa(fixed with 2% paraformaldehyde (10 min) and then permeabilized with ice-cold 90% methanol for 30 min on ice).

Primary Antibody: Rabbit Anti- Phospho-FoxO1 (Ser256)/FITC antibody(SL3142R), Dilution: 1 $\mu$ g in 100  $\mu$ L 1X PBS containing 0.5% BSA;

Isotype Control Antibody: Rabbit IgG/FITC(orange) ,used under the same conditions.



phosphopeptide non phosphopeptide

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