

FOXO4 Antibody
Catalog # ASC11152

Specification

FOXO4 Antibody - Product Information

Application	WB, ICC
Primary Accession	P98177
Other Accession	NP_005929 , 103472003
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Application Notes	FOXO4 antibody can be used for detection of FOXO4 by Western blot at 0.5 - 1 µg/mL. Antibody can also be used for immunocytochemistry starting at 10 µg/mL. For immunofluorescence start at 20 µg/mL.

FOXO4 Antibody - Additional Information

Gene ID	4303
Target/Specificity	
FOXO4;	

Reconstitution & Storage

FOXO4 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

Precautions

FOXO4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

FOXO4 Antibody - Protein Information

Name FOXO4

Synonyms AFX, AFX1, MLLT7

Function

Transcription factor involved in the regulation of the insulin signaling pathway. Binds to insulin-response elements (IREs) and can activate transcription of IGFBP1. Down-regulates expression of HIF1A and suppresses hypoxia-induced transcriptional activation of HIF1A-modulated genes. Also involved in negative regulation of the cell cycle. Involved in increased proteasome activity in embryonic stem cells (ESCs) by activating expression of PSMD11 in ESCs, leading to enhanced assembly of the 26S proteasome, followed by higher proteasome activity.

Cellular Location

Cytoplasm. Nucleus. Note=When phosphorylated, translocated from nucleus to cytoplasm. Dephosphorylation triggers nuclear translocation. Monoubiquitination increases nuclear localization. When deubiquitinated, translocated from nucleus to cytoplasm

Tissue Location

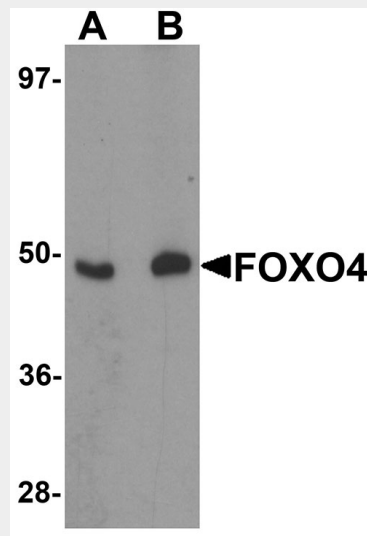
Heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas. Isoform zeta is most abundant in the liver, kidney, and pancreas

FOXO4 Antibody - Protocols

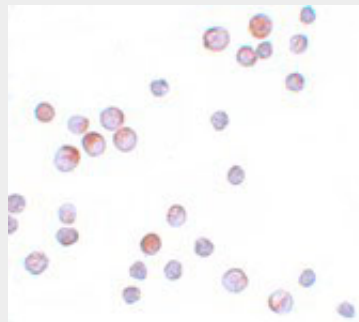
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

FOXO4 Antibody - Images



Western blot analysis of FOXO4 in HeLa cell lysate with FOXO4 antibody at (A) 0.5 and (B) 1 $\mu\text{g/mL}$.



Immunocytochemistry of FOXO4 in HeLa cells with FOXO4 antibody at 10 µg/mL.

FOXO4 Antibody - Background

FOXO4 Antibody: FOXO4 is a ubiquitously expressed protein member of a subfamily of the forkhead homeotic gene family of transcription factors and shuttles between the cytoplasm and nucleus. FOXO transcription factors are key players of cell fate decisions, metabolism, stress resistance, tumor suppression and are regulated by growth factors, oxidative stress or nutrient deprivation. In the absence of PI3K/AKT activation, FOXO4 localizes in the nucleus where it functions as a transcription factor. FOXO4 can also be phosphorylated by JNK following induction of reactive oxygen species (ROS), resulting in transcriptional activation and the induction of a negative feedback mechanism to counteract the ROS. It is through this mechanism that FOXO4 is thought to sensitize cancer cells to doxorubicin-mediated toxicity.

FOXO4 Antibody - References

Anderson MJ, Viars CS, Czekay S, et al. Cloning and characterization of three human forkhead genes that comprise an FKHR-like gene subfamily. *Genomics*1998; 47:187-99.

Greer EL and Brunet A. FOXO transcription factors at the interface between longevity and tumor suppression. *Oncogene*2005; 24:7410-25.

Manning BD and Cantley LC. AKT/PKB signaling: navigating downstream. *Cell*2007; 129:1261-74.

Essers MA, Weijzen S, de Vries-Smits AM, et al. FOXO transcription factor activation by oxidative stress mediated by the small GTPase Ral and JNK. *EMBO J.*2004; 23:4802-12.