10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

FOXO4 Antibody

Catalog # ASC11152

Product Information

Application	WB, IF, ICC, E
Primary Accession	P98177
Other Accession	NP_005929, 103472003
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	53684
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	FOXO4 antibody can be used for detection of FOXO4 by Western blot at 0.5 - 1 g/mL. Antibody can also be used for immunocytochemistry starting at 10 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	4303
Other Names	Forkhead box protein O4, Fork head domain transcription factor AFX1, FOXO4, AFX, AFX1, MLLT7
Target/Specificity	FOXO4;
Reconstitution & Storage	FOXO4 antibody can be stored at 4℃ for three months and -20℃, 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.

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

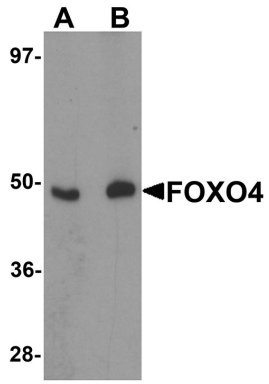
Background

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.

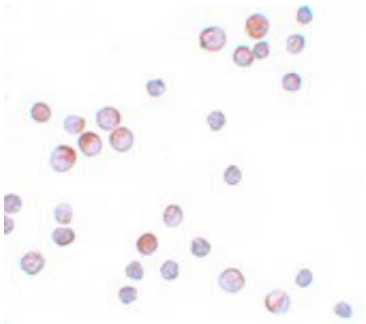
References

Anderson MJ, Viars CS, Czekay S, et al. Cloning and characterization of three human forkhead genes that comprise an FKHR-like gene subfamily. Genomics1998; 47:187-99.
Greer EL and Brunet A. FOXO transcription factors at the interface between longevity and tumor suppression. Oncogene2005; 24:7410-25.
Manning BD and Cantley LC. AKT/PKB signaling: navigating downstream. Cell2007; 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.

Images



Western blot analysis of FOXO4 in HeLa cell lysate with FOXO4 antibody at (A) 0.5 and (B) 1 µg/mL.



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

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.