abcam

Product datasheet

Anti-FOXO4/AFX (phospho S197) antibody ab47278

1 Abreviews 3 Images

Overview

Product name	Anti-FOXO4/AFX (phospho S197) antibody
Description	Rabbit polyclonal to FOXO4/AFX (phospho S197)
Host species	Rabbit
Tested applications	**Suitable for:** ICC/IF, WB, IHC-P
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide corresponding to Human FOXO4/AFX aa 150-250 (phospho S197). derived from human FOXO4/AFX around the phosphorylation site of serine 197 (A-A-SP-M-D) Database link: **P98177**
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: PBS, 50% Glycerol (glycerin, glycerine), 0.87% Sodium chloride Without Mg+2 and Ca+2
Purity	Immunogen affinity purified
Purification notes	The antibody against non-phosphopeptide was removed by chromatography using non-phosphopeptide corresponding to the phosphorylation site.
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab47278 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		
WB	★★★★☆ (1)	
IHC-P		

Application notes

ELISA: 1/20000.
IHC: 1/50 - 1/100.
ICC/IF: Use at a concentration of 1-5 µg/ml.
WB: 1/500 - 1/1000. Detects a band of approximately 66 kDa (predicted molecular weight: 54 kDa).

Not yet tested in other applications.
Optimal dilutions/concentrations should be determined by the end user.

Target

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.

Tissue specificity

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

Involvement in disease

Note=A chromosomal aberration involving FOXO4 is found in acute leukemias. Translocation t(X;11)(q13;q23) with MLL/HRX. The result is a rogue activator protein.

Sequence similarities

Contains 1 fork-head DNA-binding domain.

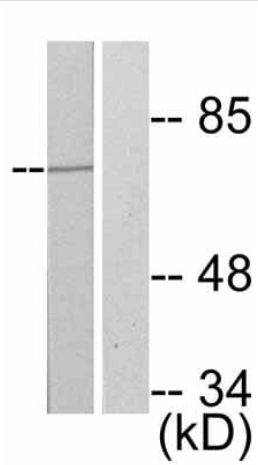
Post-translational modifications

Acetylation by CBP, which is induced by peroxidase stress, inhibits transcriptional activity. Deacetylation by SIRT1 is NAD-dependent and stimulates transcriptional activity. Phosphorylation by PKB/AKT1 inhibits transcriptional activity and is responsible for cytoplasmic localization.
Monoubiquitinated; monoubiquitination is induced by oxidative stress and reduced by deacetylase inhibitors; results in its relocalization to the nucleus and its increased transcriptional activity. Deubiquitinated by USP7; deubiquitination is induced by oxidative stress; enhances its interaction with USP7 and consequently, deubiquitination; increases its translocation to the cytoplasm and inhibits its transcriptional activity. Hydrogene-peroxide-induced ubiquitination and USP7-mediated deubiquitination have no major effect on its protein stability.

Cellular localization

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

Images



Western blot - Anti-FOXO4/AFX (phospho S197) antibody (ab47278)

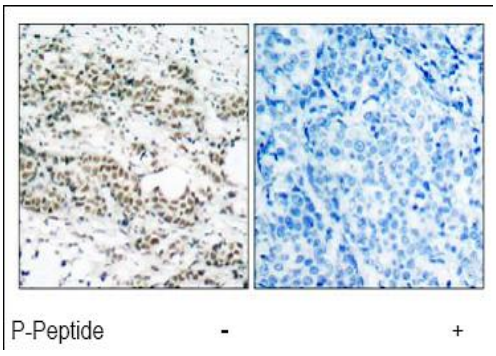
All lanes : Anti-FOXO4/AFX (phospho S197) antibody (ab47278) at 1/500 dilution

Lane 1 : Extracts from 293 cells.
Lane 2 : Extracts from 293 cells. Immunizing peptide 1ug/mL

Lysates/proteins at 30 µg per lane.

Predicted band size: 54 kDa

Peptide - +



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FOXO4/AFX (phospho S197) antibody (ab47278)

This image shows human breast carcinoma stained with **ab47781** at 1/50 dilution. Right hand image:tissue was treated with immunogenic peptide, left hand image: untreated.

Immunocytochemistry/ Immunofluorescence - Anti-FOXO4/AFX (phospho S197) antibody (ab47278)

ICC/IF image of ab47278 stained HeLa cells. The cells were 4% PFA fixed (10 min) and then incubated in 1%BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab47278, 1µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

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