

## Product datasheet

# Anti-FOXO4/AFX (phospho S197) antibody ab47278

★★★★★ 1 Abreviews 3 Images

### Overview

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<b>Product name</b>	Anti-FOXO4/AFX (phospho S197) antibody
<b>Description</b>	Rabbit polyclonal to FOXO4/AFX (phospho S197)
<b>Host species</b>	Rabbit
<b>Specificity</b>	This (phospho-Ser197) antibody detects endogenous levels of FOXO4/AFX only when phosphorylated at serine 197.
<b>Tested applications</b>	<b>Suitable for:</b> ICC/IF, WB, IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human
<b>Immunogen</b>	Synthetic peptide corresponding to Human FOXO4/AFX. derived from human FOXO4/AFX around the phosphorylation site of serine 197 (A-A-SP-M-D)
<b>General notes</b>	<p>Previously labelled as FOXO4.</p> <p>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.</p> <p>Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.</p> <p>We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications &amp; species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.</p> <p>In preparation for this, we have started to update the applications &amp; species that this product is Abpromise guaranteed for.</p> <p>We are also updating the applications &amp; species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.</p> <p>Applications &amp; species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.</p> <p>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, as well as customer reviews and Q&amp;As.</p>

### Properties

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

## Applications

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	★★★★☆	
IHC-P		

<b>Application notes</b>	<p>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).</p> <p>Not yet tested in other applications. Optimal dilutions/concentrations should be determined by the end user.</p>
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## Target

<b>Function</b>	Transcription factor involved in the regulation of the insulin signaling pathway. Binds to insulin-response elements (IREs) and can activate transcription of IGF1. Down-regulates expression of HIF1A and suppresses hypoxia-induced transcriptional activation of HIF1A-modulated genes. Also involved in negative regulation of the cell cycle.
<b>Tissue specificity</b>	Heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas. Isoform zeta is most abundant in the liver, kidney, and pancreas.
<b>Involvement in disease</b>	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.
<b>Sequence similarities</b>	Contains 1 fork-head DNA-binding domain.
<b>Post-translational</b>	Acetylation by CBP, which is induced by peroxidase stress, inhibits transcriptional activity.

## modifications

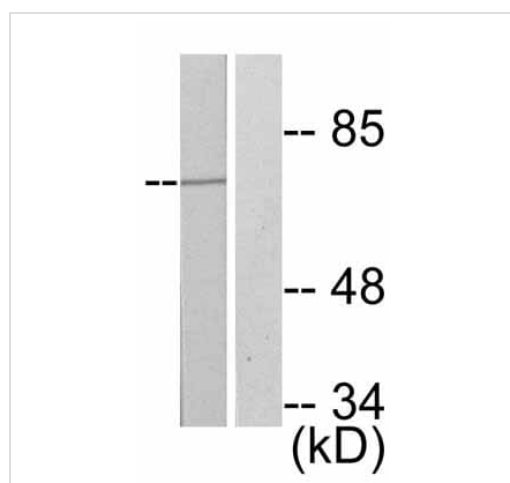
Deacetylation by SIRT1 is NAD-dependent and stimulates transcriptional activity. Phosphorylation by PKB/AKT1 inhibits transcriptional activity and is responsible for cytoplasmic localization.

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

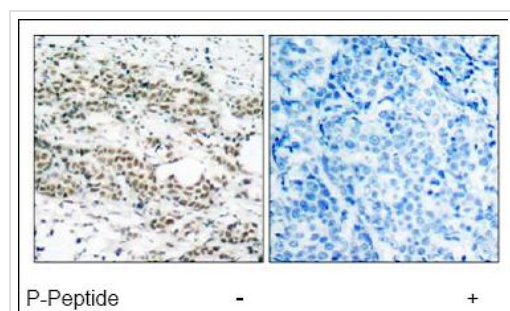
**Lane 1 :** Extracts from 293 cells.

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

Lysates/proteins at 30 µg per lane.

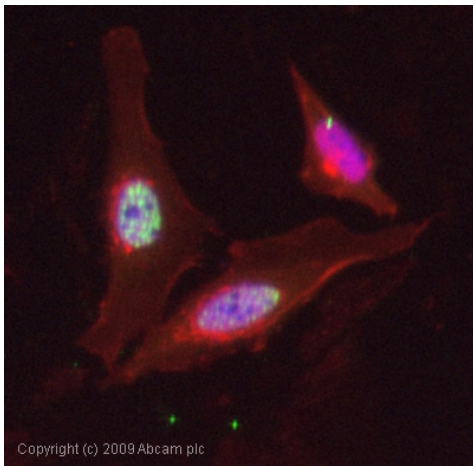
**Predicted band size:** 54 kDa

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.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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