


Product datasheet

Anti-FOXO1A (phospho S319) antibody ab47326

3 Images

Overview

Product name	Anti-FOXO1A (phospho S319) antibody
Description	Rabbit polyclonal to FOXO1A (phospho S319)
Host species	Rabbit
Specificity	This antibody detects endogenous levels of FOXO1A only when phosphorylated at serine 319. (Human: Ser319; Mouse: Ser316; Rat: Ser313)
Tested applications	Suitable for: ICC/IF, WB, IHC-P, ELISA
Species reactivity	Reacts with: Human Predicted to work with: Mouse, Rat 
Immunogen	Synthetic phosphopeptide derived from human FOXO1A around the phosphorylation site of serine 319 (T-S-S ^P -N-A)
Positive control	human breast carcinoma, HeLa cells.
General notes	<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 & 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 & species that this product is Abpromise guaranteed for.</p> <p>We are also updating the applications & species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.</p> <p>Applications & 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&As.</p>

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
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

Our [Abpromise guarantee](#) covers the use of **ab47326** 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		
ELISA		

Application notes	ELISA: 1/10000. ICC/IF: Use at a concentration of 1 µg/ml. IHC-P: 1/50 - 1/100. WB: 1/500 - 1/1000. Detects a band of approximately 70 kDa (predicted molecular weight: 70 kDa). Not yet tested in other applications. Optimal dilutions/concentrations should be determined by the end user.
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Target

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.
Tissue specificity	Ubiquitous.
Involvement in 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.

Sequence similarities

Contains 1 fork-head DNA-binding domain.

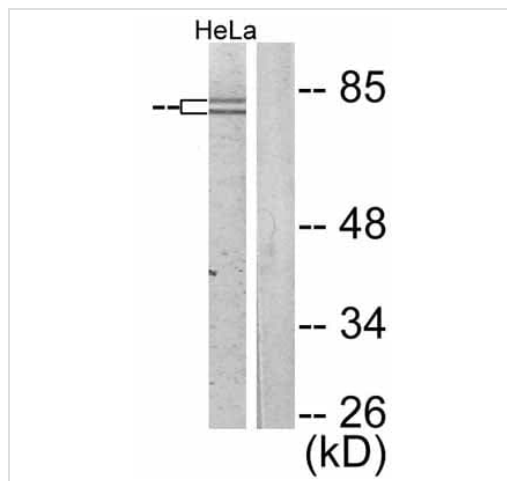
Post-translational modifications

Phosphorylated by AKT1; insulin-induced (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.

Cellular localization

Cytoplasm. Nucleus. Shuttles between cytoplasm and nucleus.

Images



Western blot - Anti-FOXO1A (phospho S319) antibody (ab47326)

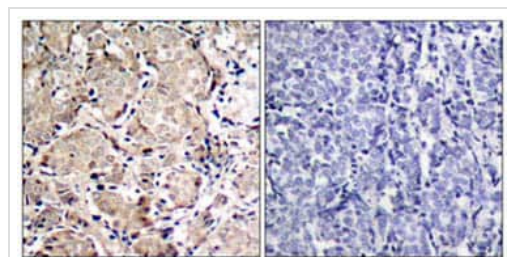
All lanes : Anti-FOXO1A (phospho S319) antibody (ab47326)

Lane 1 : extracts from EGF treated HeLa cells

Lane 2 : extracts from HeLa cells

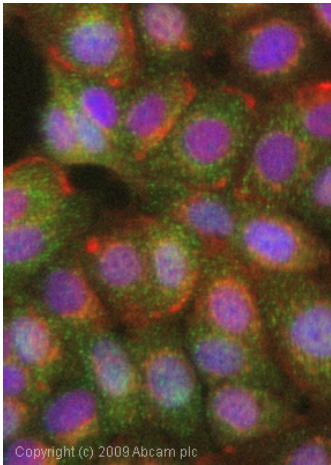
Predicted band size: 70 kDa

Typically 5-30ug of total protein was loaded per lane of the gel.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FOXO1A (phospho S319) antibody (ab47326)

ab47326 staining human breast carcinoma tissue by IHC-P (left hand panel). The right hand panel shows staining in the presence of phospho-peptide.



ICC/IF image of ab47326 stained MCF7 cells. The cells were 4% formaldehyde 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 (ab47326, 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.

Immunocytochemistry/ Immunofluorescence - Anti-FOXO1A (phospho S319) antibody (ab47326)

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

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