


## Product datasheet

### Anti-FOXO3A antibody ab70315

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#### Overview

<b>Product name</b>	Anti-FOXO3A antibody
<b>Description</b>	Rabbit polyclonal to FOXO3A
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB, IP, IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Human <b>Predicted to work with:</b> Rat, Sheep, Rabbit, Horse, Chicken, Guinea pig, Cow, Dog, Turkey, Pig, Chimpanzee, Rhesus monkey, Gorilla, Orangutan 
<b>Immunogen</b>	Synthetic peptide corresponding to a region between residue 625 and the C terminus (residue 673) of human FOXO3A. (Swiss-Prot O43524).
<b>Positive control</b>	Whole cell lysate from MCF7 cells
<b>General notes</b>	<p>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.</p> <p>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&amp;As</p>

#### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
<b>Storage buffer</b>	pH: 7 Preservative: 0.09% Sodium azide Constituents: 1.815% Tris, 1.764% Sodium citrate, 0.021% PBS
<b>Purity</b>	Immunogen affinity purified
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

#### Applications

## The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab70315 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
WB		1/2000 - 1/10000. Detects a band of approximately 85 kDa (predicted molecular weight: 71 kDa).
IP		Use at 2-5 µg/mg of lysate.
IHC-P		1/500 - 1/2000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

## Target

### Function

Transcriptional activator which triggers apoptosis in the absence of survival factors, including neuronal cell death upon oxidative stress. Recognizes and binds to the DNA sequence 5'-[AG]TAAA[TC]A-3'.

### Tissue specificity

Ubiquitous.

### Involvement in disease

Note=A chromosomal aberration involving FOXO3 is found in secondary acute leukemias. Translocation t(6;11)(q21;q23) with MLL/HRX.

### Sequence similarities

Contains 1 fork-head DNA-binding domain.

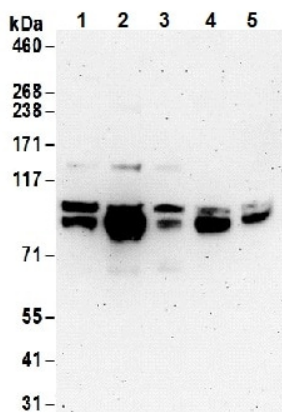
### Post-translational modifications

In the presence of survival factors such as IGF-1, phosphorylated on Thr-32 and Ser-253 by AKT1/PKB. This phosphorylated form then interacts with 14-3-3 proteins and is retained in the cytoplasm. Survival factor withdrawal induces dephosphorylation and promotes translocation to the nucleus where the dephosphorylated protein induces transcription of target genes and triggers apoptosis. Although AKT1/PKB doesn't appear to phosphorylate Ser-315 directly, it may activate other kinases that trigger phosphorylation at this residue. Phosphorylated by STK4 on Ser-209 upon oxidative stress, which leads to dissociation from YWHAB/14-3-3-beta and nuclear translocation. Phosphorylated by PIM1.

### Cellular localization

Cytoplasm > cytosol. Nucleus. Translocates to the nucleus upon oxidative stress and in the absence of survival factors.

## Images



Western blot - Anti-FOXO3A antibody (ab70315)

**All lanes :** Anti-FOXO3A antibody (ab70315) at 0.1 µg/ml

**Lane 1 :** HeLa cell Lysate

**Lane 2 :** 293T cell Lysate

**Lane 3 :** Jurkat cell Lysate

**Lane 4 :** Mouse TCMK-1 cell Lysate

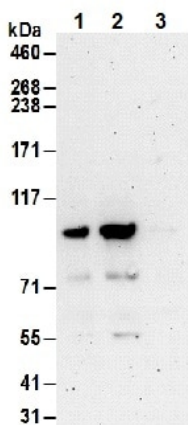
**Lane 5 :** Mouse NIH3T3 cell Lysate

Lysates/proteins at 50 µg per lane.

Developed using the ECL technique.

**Predicted band size:** 71 kDa

**Exposure time:** 3 minutes



Immunoprecipitation - Anti-FOXO3A antibody  
(ab70315)

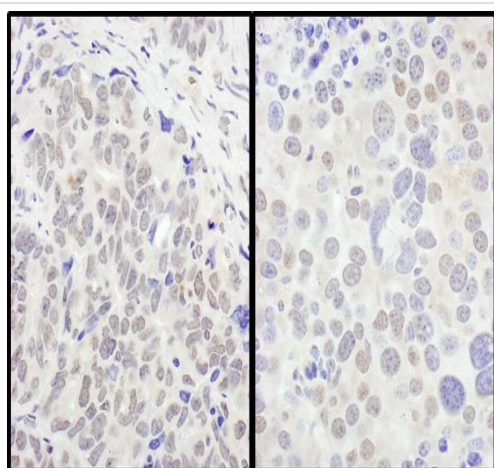
Lane 1: MCF7 cell Lysate immunoprecipitated with **ab70314** at 6 ug/mg of Lysate

Lane 2: MCF7 cell Lysate immunoprecipitated with ab70315 at 6 ug/mg of Lysate

Lane 3: MCF7 cell Lysate immunoprecipitated with Control IgG at 6 ug/mg of Lysate

Western Blot carried out with ab70315 at 1ug/ml.

Detection by ECL for 3 minutes.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human ovarian carcinoma (left) and mouse renal cell carcinoma (right) tissues labelling FOXO3A with ab70315 at 1/1000 (1µg/ml). Detection: DAB.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FOXO3A antibody (ab70315)

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

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