abcam

Product datasheet

Anti-FOXO1A antibody ab39670

12 Abreviews 89 References 4 Images

Overview

Product name	Anti-FOXO1A antibody
Description	Rabbit polyclonal to FOXO1A
Host species	Rabbit
Tested applications	**Suitable for:** ELISA, WB, IHC-P
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide corresponding to Human FOXO1A. Synthetic non-phosphopeptide derived from human FOXO1A around the phosphorylation site of serine 319. Database link: **Q12778**
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 +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: 50% Glycerol (glycerin, glycerine), 0.87% Sodium chloride, PBS Without Mg2+ and Ca2+
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab39670 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
ELISA		Use at an assay dependent concentration.
WB	★★★★☆ **(6)**	1/500 - 1/1000. Detects a band of approximately 70 kDa (predicted molecular weight: 70 kDa).
IHC-P	★★★★☆ **(3)**	Use at an assay dependent concentration.

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.

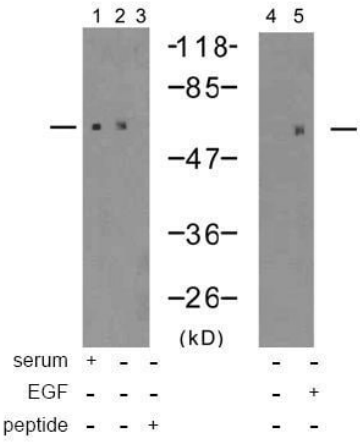
Involvement in disease Defects in FOXO1 are a cause of rhabdomyosarcoma type 2 (RMS2) [MIM:268220]. It is a form of rhabdomyosarcoma, a highly malignant tumor of striated muscle derived from primitive mesenchimal cells and exhibiting differentiation along rhabdomyoblastic lines. Rhabdomyosarcoma is one 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 antibody (ab39670)

Lanes 1-3 : Anti-FOXO1A antibody (ab39670) at 1/500 dilution
Lanes 4-5 : Anti-FOXO1A (phospho S319) antibody (**ab38516**) at 1/500 dilution

Lane 1 : 293 Cell extract
Lanes 2-5 : HeLa Cell extract

Lysates/proteins at 30 µg per lane.

Secondary
All lanes : Alkaline Phosphatase AffiniPure Goat Anti-Rabbit IgG (H+L)

Predicted band size: 70 kDa
Observed band size: 70 kDa

10% gel.

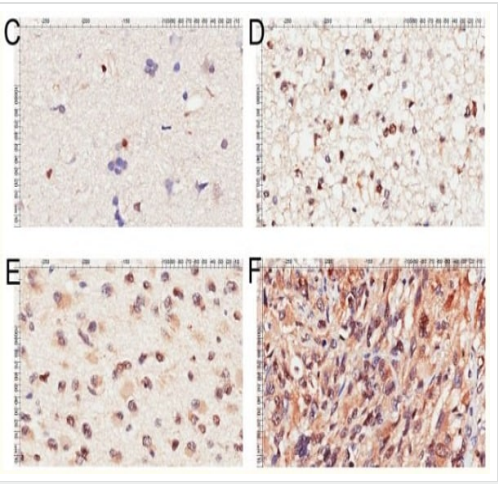
Running conditions: 60v, 30min; 120v 60min

Transfer conditions: 150mA 120min Nitrocellulose membrane.

Blocking conditions: 5% non-fat milk in TBST, RT, 90min.

Primary antibody incubation: 4?, overnight.

Washing condition: 5 ml TBST, 4 x 5min.



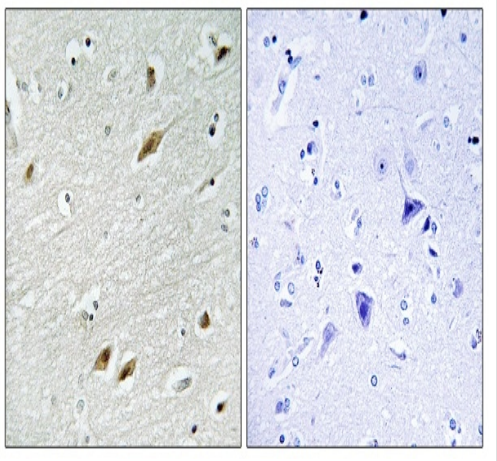
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FOXO1A antibody (ab39670)

Tissue microarray analysis of FOXO1 expression

Representative images of FOXO1 expression in normal brain tissue (C, ×200); grade Ⅱ diffuse astrocytoma (D, ×200); grade Ⅲ anaplastic astrocytoma (E, ×200) and grade Ⅳ glioblastoma (F, ×200).

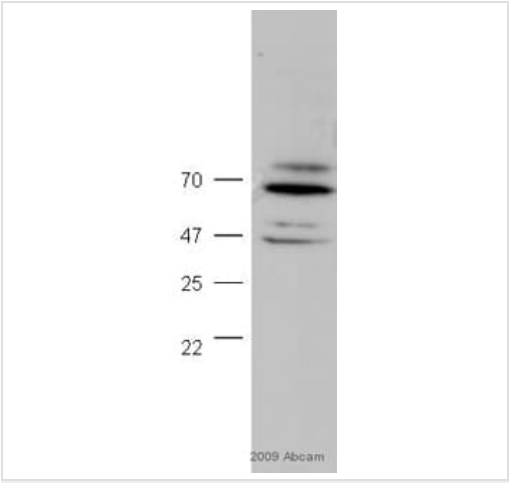
FOXO1 was detected using ab39670 at 1/200 dilution. The tissue microarray was contructed from paraffin-embedded human brain tissue samples.

(After Figure 1 of Chen et al).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-FOXO1A antibody (ab39670)

Paraffin-embedded human brain tissue stained for FOXO1 with ab39670 at 1/50 dilution in immunohistochemical analysis. The right hand image was obtained following blocking with the immunizing peptide.



Western blot - Anti-FOXO1A antibody (ab39670)

This image is courtesy of an anonymous abreview.

Anti-FOXO1A antibody (ab39670) at 1/1000 dilution + Whole cell lysates prepared from human Jurkat cells at 200000 cells

Secondary

HRP-conjugated donkey polyclonal to rabbit IgG at 1/2000 dilution

Developed using the ECL technique.

Predicted band size: 70 kDa

Observed band size: 70 kDa

Additional bands at: 45 kDa (possible non-specific binding), 50 kDa (possible non-specific binding), 80 kDa (possible non-specific binding)

Exposure time: 30 seconds

Primary diluted in PBS (BSA + 0.1% Tween20) and incubated with sample for 90 minutes at 20°C.

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