abcam

Product datasheet

Anti-FOXO4 (phospho T451) antibody ab79188

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Overview

Product name	Anti-FOXO4 (phospho T451) antibody
Description	Rabbit polyclonal to FOXO4 (phospho T451)
Host species	Rabbit
Specificity	ab79188 detects endogenous levels of FOXO4 only when phosphorylated at threonine 451 (Human: Thr451; Mouse: Thr452).
Tested applications	**Suitable for:** WB, ELISA
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse
Immunogen	Synthetic phosphopeptide derived from human FOXO4 around the phosphorylation site of threonine 451 (L-G-T^{P}-P-V).
Positive control	Extracts from HUVEC cells treated with EGF (200ng/ml, 5mins).

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	Preservative: 0.02% Sodium Azide Constituents: 50% Glycerol, PBS (without Mg^{2+} and Ca^{2+}), 150mM Sodium chloride, pH 7.4
Purity	Immunogen affinity purified
Purification notes	ab79188 was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific phosphopeptide. 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 **ab79188** in the following tested applications.

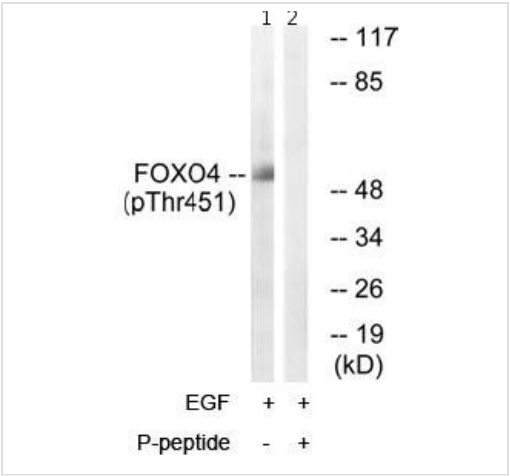
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/500 - 1/1000. Predicted molecular weight: 54 kDa.
ELISA		1/10000.

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 - FOXO4 (phospho T451) antibody (ab79188)

All lanes : Anti-FOXO4 (phospho T451) antibody (ab79188) at 1/500 dilution

Lane 1 : Extracts from HUVEC cells treated with EGF (200ng/ml, 5mins)
Lane 2 : Extracts from HUVEC cells treated with EGF (200ng/ml, 5mins) with immunising phosphopeptide at 10 µg

Lysates/proteins at 30 µg per lane.

Predicted band size: 54 kDa
Observed band size: 54 kDa

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