

Anti-FOXO3 Antibody (7C993)

Product Details

Ig Type:	Rabbit IgG
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	7C993
Purification:	Affinity-chromatography

Applications

Verified Activity:	<p>1. Western Blot</p> <ul style="list-style-type: none">-Positive WB detected in: 293 whole cell lysate, Jurkat whole cell lysate, SH-SY5Y whole cell lysate, U87 whole cell lysate-All lanes: FOXO3A antibody at 1.8µg/ml-Secondary: Goat polyclonal to rabbit IgG at 1/50000 dilution-Predicted band size: 72, 49 KDa-Observed band size: 72-90 KDa <p>2. IHC image of TMAH-00455 diluted at 1:180 and staining in paraffin-embedded human endometrial cancer performed on a Leica Bond™ system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.</p> <p>3. IHC image of TMAH-00455 diluted at 1:180 and staining in paraffin-embedded human tonsil tissue performed on a Leica Bond™ system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.</p> <p>4. Immunofluorescence staining of PC3 cells with TMAH-00455 at 1:60, counter-stained with DAPI. The cells were fixed in 4% formaldehyde, permeabilized using 0.2% Triton X-100 and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4°C. The secondary antibody was Alexa Fluor 488-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L).</p>
Application:	ELISA,IF,IHC,WB
Recommended	WB:1:500-1:5000; IHC:1:50-1:200; IF:1:20-1:200.

Properties

Stability & Storage:	Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	A synthetic peptide: Human FOXO3
Antigen Species:	Human
Gene ID:	2309
Uniprot ID:	O43524
Synonyms:	MGC12739;FOX O3A;Forkhead in rhabdomyosarcoma-like 1;FOXO3A;Forkhead Drosophila homolog of in rhabdomyosarcoma like 1;FKHRL 1;FKHRL1;FKHRL1P2;Forkhead box O3A;Forkhead (Drosophila) homolog (rhabdomyosarcoma) like 1;Forkhead box O3;FKHR2;Forkhead homolog (rhabdomyosarcoma) like 1;AF6q21;DKFZp781A0677;MGC31925
Biology Area:	Epigenetics and Nuclear Signaling

Research Background

Transcriptional activator that recognizes and binds to the DNA sequence 5'-[AG]TAAA[TC]A-3' and regulates different processes, such as apoptosis and autophagy. Acts as a positive regulator of autophagy in skeletal muscle: in starved cells, enters the nucleus following dephosphorylation and binds the promoters of autophagy genes, such as GABARAP1L, MAP1LC3B and ATG12, thereby activating their expression, resulting in proteolysis of skeletal muscle proteins. Triggers apoptosis in the absence of survival factors, including neuronal cell death upon oxidative stress. Participates in post-transcriptional regulation of MYC: following phosphorylation by MAPKAPK5, promotes induction of miR-34b and miR-34c expression, 2 post-transcriptional regulators of MYC that bind to the 3'UTR of MYC transcript and prevent its translation. In response to metabolic stress, translocates into the mitochondria where it promotes mtDNA transcription. In response to metabolic stress, translocates into the mitochondria where it promotes mtDNA transcription. Also acts as a key regulator of chondrogenic commitment of skeletal progenitor cells in response to lipid availability: when lipids levels are low, translocates to the nucleus and promotes expression of SOX9, which induces chondrogenic commitment and suppresses fatty acid oxidation. Also acts as a key regulator of regulatory T-cells (Treg) differentiation by activating expression of FOXP3.

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