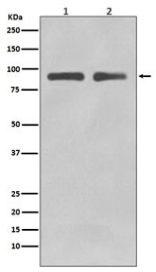
Forkhead Box O3 Antibody / FOXO3A Antibody [clone ACA-6] (RQ4740)

Catalog No.	Formulation	Size
RQ4740	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

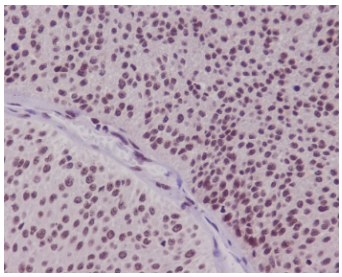
Recombinant RABBIT MONOCLONAL

Bulk quote request

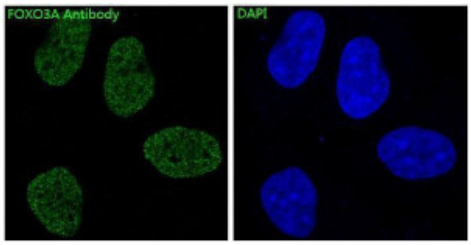
Availability	1-2 weeks
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	ACA-6
Purity	Affinity purified
UniProt	O43524
Applications	Western blot: 1:500-1:2000 Immunohistochemistry (FFPE): 1:50-1:200
Limitations	This Forkhead Box O3 Antibody / FOXO3A Antibody is available for research use only.



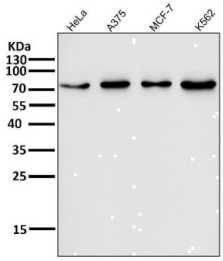
Forkhead Box O3 Antibody Human T Cell and Neuroblastoma WB. Western blot analysis was performed using FOXO3A Antibody on lane 1: human Jurkat and lane 2: human SH-SY5Y cell lysates. A distinct immunoreactive band is detected at approximately 71â€“90 kDa in both samples, consistent with the expected migration of FOXO3A, which commonly migrates over this range depending on glycosylation and other post-translational modifications. Detection in both hematopoietic and neuronal cell lines demonstrates expression of this widely conserved forkhead transcription factor. This Forkhead Box O3 Antibody / FOXO3A Antibody is well suited for Western blot studies of transcriptional regulation, PI3K/AKT signaling, apoptosis, oxidative stress responses, and cell fate determination.



Forkhead Box O3 Antibody Human Bladder Carcinoma IHC. FOXO3A Antibody was used for immunohistochemical staining of FFPE human bladder carcinoma tissue. Heat-induced epitope retrieval was performed in pH 6 citrate buffer before incubation with the primary antibody, followed by HRP-conjugated secondary antibody and chromogenic detection. Predominant nuclear staining is observed in the tumor cells, consistent with the role of FOXO3A as a forkhead transcription factor that regulates genes involved in apoptosis, cell cycle control, and cellular stress responses. This Forkhead Box O3 Antibody / FOXO3A Antibody is well suited for investigating FOXO3A expression, transcription factor biology, PI3K/AKT signaling, and tumor-associated regulatory pathways.



Forkhead Box O3 Antibody HeLa Cell IF. FOXO3A Antibody was used for immunofluorescent analysis of human HeLa cells. The antibody produced strong nuclear fluorescence (green), consistent with the localization of FOXO3A as a forkhead transcription factor that regulates genes involved in apoptosis, oxidative stress responses, and cell cycle control. Nuclei are counterstained with DAPI (blue). This Forkhead Box O3 Antibody / FOXO3A Antibody is well suited for investigating FOXO3A localization, transcription factor activity, PI3K/AKT signaling, and cellular stress response pathways.



Forkhead Box O3 Antibody Human Cancer Cell WB. Western blot analysis was performed using FOXO3A Antibody on lane 1: human HeLa, lane 2: human A375, lane 3: human MCF-7, and lane 4: human K562 cell lysates. A distinct immunoreactive band is detected at approximately 71â€“90 kDa in all samples, consistent with the expected migration of FOXO3A, which commonly migrates above its predicted molecular weight due to glycosylation and other post-translational modifications. Expression across epithelial, melanoma, breast cancer, and leukemia cell lines demonstrates the broad distribution of this forkhead transcription factor. This Forkhead Box O3 Antibody / FOXO3A Antibody is well suited for Western blot studies of transcriptional regulation, PI3K/AKT signaling, apoptosis, oxidative stress responses, and cell fate determination.

Description

Forkhead Box O3 Antibody / FOXO3A Antibody recognizes Forkhead Box O3 (FOXO3A), a member of the Forkhead box O family of transcription factors that coordinates gene expression programs controlling apoptosis, oxidative stress resistance, autophagy, metabolism, DNA repair, and cell cycle progression. The designation Forkhead Box O3 emphasizes the protein's membership within the highly conserved forkhead transcription factor family, whose members regulate diverse physiological processes through sequence-specific DNA binding. Because FOXO3A integrates signals from growth factors, nutrient availability, and cellular stress, a Forkhead Box O3 Antibody is widely used to investigate transcriptional regulation, intracellular signaling, and mechanisms that maintain cellular homeostasis.

Forkhead Box O3 functions downstream of several major signaling pathways, most notably the phosphoinositide 3-kinase (PI3K)/AKT cascade. Under growth-promoting conditions, AKT phosphorylates FOXO3A, resulting in its association with 14-3-3 proteins, export from the nucleus, and inhibition of transcriptional activity. During oxidative stress or nutrient deprivation, FOXO3A translocates back to the nucleus where it activates genes involved in antioxidant defense, apoptosis, autophagy, DNA damage repair, and metabolic adaptation. Researchers frequently analyze Forkhead Box O3 alongside AKT, mTOR, PTEN, and additional signaling proteins to better understand the dynamic regulation of cell survival and stress responses. A Forkhead Box O3 Antibody therefore serves as an important reagent for studies of transcription factor biology and signal transduction.

Abnormal regulation of Forkhead Box O3 has been implicated in numerous diseases, including breast, prostate, lung, colorectal, ovarian, and hematologic cancers, where suppression of FOXO3A activity contributes to tumor progression and therapeutic resistance. Beyond oncology, FOXO3A has been associated with diabetes, cardiovascular disease,

neurodegenerative disorders, immune regulation, skeletal muscle maintenance, stem cell biology, and healthy aging. Human genetic studies have further identified FOXO3A variants associated with exceptional longevity, underscoring its importance in maintaining long-term cellular function. Consequently, a Forkhead Box O3 Antibody has become an essential research tool for investigations spanning cancer biology, metabolism, neuroscience, immunology, and aging research.

Forkhead Box O3 is routinely analyzed using Western blot, immunohistochemistry, immunofluorescence, immunoprecipitation, chromatin immunoprecipitation, and flow cytometry to evaluate protein expression, intracellular localization, and transcriptional regulation. When used together with phospho-specific FOXO3A antibodies, researchers can distinguish changes in total protein abundance from phosphorylation-dependent modulation of activity. NSJ Bioreagents provides carefully validated antibodies to support these applications across diverse experimental systems. A Forkhead Box O3 Antibody / FOXO3A Antibody provides researchers with a dependable reagent for investigating transcriptional regulation, apoptosis, oxidative stress responses, PI3K/AKT signaling, and mechanisms governing cellular fate.

Visit our FOXO3A Antibody / Forkhead Transcription Factor Antibody page for additional information about validated antibodies for investigating FOXO3A expression, forkhead transcription factor biology, PI3K/AKT signaling, apoptosis, and oxidative stress responses.

Application Notes

Optimal dilution of the Forkhead Box O3 Antibody / FOXO3A Antibody should be determined by the researcher.

Immunogen

A synthetic peptide specific to human FOXO3A was used as the immunogen for the FOXO3A antibody.

Storage

Store the FOXO3A antibody at -20oC.

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