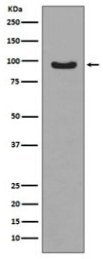
Phospho-FOXO3A (S253) Antibody / Phosphorylated FOXO3A Antibody [clone ECG-6] (RQ4742)

Catalog No.	Formulation	Size
RQ4742	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

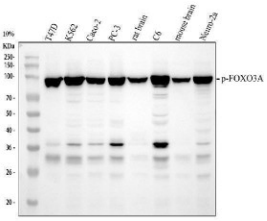
Recombinant RABBIT MONOCLONAL

Bulk quote request

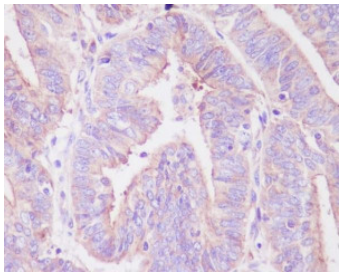
Availability	1-2 weeks
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	ECG-6
Purity	Affinity purified
UniProt	O43524
Applications	Western blot: 1:500-1:2000 Immunohistochemistry (FFPE): 1-:50-1:200
Limitations	This Phospho-FOXO3A (S253) Antibody / Phosphorylated FOXO3A Antibody is available for research use only.



Phospho-FOXO3A (S253) Antibody IGF-Stimulated MCF-7 WB. Western blot analysis was performed using Phospho-FOXO3A (S253) Antibody on IGF-treated human MCF-7 cell lysate. A distinct immunoreactive band is detected at approximately 90 kDa, consistent with the expected migration of phosphorylated FOXO3A, which is commonly observed between 71â€“90 kDa depending on glycosylation and other post-translational modifications. Detection following IGF stimulation reflects activation of the PI3K/AKT signaling pathway and phosphorylation of FOXO3A at serine 253. This Phospho-FOXO3A (S253) Antibody / Phosphorylated FOXO3A Antibody is well suited for Western blot studies of AKT signaling, growth factor responses, FOXO3A regulation, and phosphorylation-dependent transcriptional control.



Phospho-FOXO3A (S253) Antibody Multi-Species Cell and Brain WB. Western blot analysis was performed using Phospho-FOXO3A (S253) Antibody on lane 1: human T47D, lane 2: human K562, lane 3: human Caco-2, lane 4: human PC-3, lane 5: rat brain, lane 6: rat C6, lane 7: mouse brain, and lane 8: mouse Neuro-2a lysates. A prominent immunoreactive band is detected at approximately 80â€“100 kDa across all samples, consistent with the expected migration of phosphorylated FOXO3A, which commonly migrates above its predicted molecular weight due to post-translational modifications. This Phospho-FOXO3A (S253) Antibody / Phosphorylated FOXO3A Antibody is well suited for Western blot studies of AKT signaling, FOXO3A phosphorylation, growth factor-mediated signaling, and phosphorylation-dependent transcriptional regulation.



Phospho-FOXO3A (S253) Antibody Human Uterine Cancer IHC. Phospho-FOXO3A (S253) Antibody was used for immunohistochemical staining of FFPE human uterine cancer tissue. Following antigen retrieval, the tissue was incubated with the phospho-specific primary antibody, followed by an HRP-conjugated secondary antibody and chromogenic detection. Predominantly cytoplasmic staining is observed in the malignant epithelial cells, consistent with phosphorylation of FOXO3A at serine 253, an event that promotes nuclear export and transcriptional inactivation through AKT signaling. This Phospho-FOXO3A (S253) Antibody / Phosphorylated FOXO3A Antibody is well suited for investigating PI3K/AKT pathway activation, FOXO3A phosphorylation, growth factor signaling, and phosphorylation-dependent regulation of tumor biology.

Description

Phospho-FOXO3A (S253) Antibody / Phosphorylated FOXO3A Antibody specifically recognizes FOXO3A phosphorylated at serine 253, a critical regulatory modification that controls the activity, localization, and transcriptional function of this Forkhead box O transcription factor. FOXO3A regulates genes involved in apoptosis, cell cycle arrest, oxidative stress resistance, DNA repair, metabolism, and longevity. Activation of the phosphoinositide 3-kinase (PI3K)/AKT signaling pathway results in phosphorylation of FOXO3A at serine 253, promoting binding to 14-3-3 proteins, nuclear export, and suppression of FOXO3A-dependent transcription. A Phospho-FOXO3A (S253) Antibody is therefore widely used to monitor AKT pathway activity and phosphorylation-dependent regulation of FOXO3A.

Phosphorylated FOXO3A serves as an important biomarker of growth factor signaling initiated by insulin, insulin-like growth factor, epidermal growth factor, and numerous additional extracellular stimuli that activate AKT. Increased phosphorylation at serine 253 inhibits FOXO3A-mediated expression of genes responsible for apoptosis, autophagy, antioxidant defense, and cellular stress adaptation, thereby promoting cell survival and proliferation. Conversely, loss of phosphorylation allows FOXO3A to accumulate within the nucleus and activate transcriptional programs associated with growth inhibition and resistance to oxidative damage. Researchers frequently examine phosphorylated FOXO3A together with total FOXO3A, phospho-AKT, phospho-mTOR, and other signaling proteins to better understand dynamic regulation of the PI3K/AKT pathway. A Phosphorylated FOXO3A Antibody provides valuable insight into these signaling events and their biological consequences.

Persistent phosphorylation of FOXO3A at serine 253 has been implicated in numerous human diseases, including breast, prostate, lung, colorectal, ovarian, and hematologic cancers, where constitutive AKT activation suppresses FOXO3A tumor suppressor activity. Altered phosphorylation has also been associated with resistance to targeted therapies, uncontrolled cellular proliferation, impaired apoptosis, metabolic disorders, cardiovascular disease, neurodegeneration, skeletal muscle atrophy, immune dysfunction, and aging-related pathologies. Because phosphorylation status often changes rapidly in response to extracellular signals, phospho-specific antibodies provide an important means of evaluating pathway activation independently of total protein abundance. Consequently, a Phospho-FOXO3A (S253) Antibody has become an essential reagent for signal transduction and cancer research.

Phosphorylated FOXO3A is routinely analyzed using Western blot, immunohistochemistry, immunofluorescence,

immunocytochemistry, flow cytometry, and immunoprecipitation to assess activation of the PI3K/AKT signaling cascade and regulation of FOXO3A activity. When paired with antibodies recognizing total FOXO3A, researchers can distinguish phosphorylation-dependent signaling events from changes in protein expression. NSJ Bioreagents provides carefully validated phospho-specific antibodies to support investigations across cancer biology, metabolism, neuroscience, immunology, and cell signaling. A Phospho-FOXO3A (S253) Antibody / Phosphorylated FOXO3A Antibody enables reliable detection of this critical phosphorylation event while supporting research into AKT signaling, transcriptional regulation, cellular stress responses, and disease-associated signaling pathways.

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 Phospho-FOXO3A (S253) Antibody / Phosphorylated FOXO3A Antibody should be determined by the researcher.

Immunogen

A synthetic peptide specific to human FOXO3A (surrounding pS253) was used as the immunogen for the phospho-Phospho-FOXO3A (S253) Antibody.

Storage

Store the Phospho-FOXO3A (S253) Antibody at -20oC.

Alternate Names

Phospho-FOXO3A (S253) antibody, Phosphorylated FOXO3A antibody, Phosphorylated FOXO3A (S253) antibody, Phospho FKHRL1 (S253) antibody

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