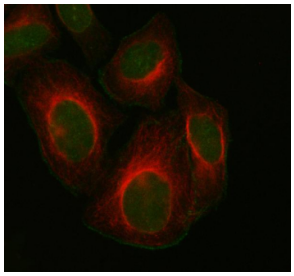
FOXM1 Antibody / Forkhead box protein M1 (FY12211)

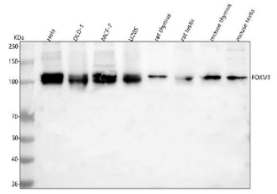
Catalog No.	Formulation	Size
FY12211	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

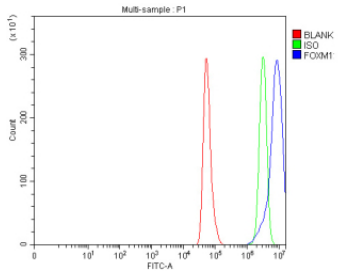
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q08050
Localization	Nuclear
Applications	Western Blot : 0.25-0.5ug/ml Immunocytochemistry : 5ug/ml Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This FOXM1 antibody is available for research use only.



Immunofluorescent staining of FOXM1 using anti-FOXM1 antibody (green) and anti-Beta Tubulin antibody (red). FOXM1 was detected in immunocytochemical section of HELA cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-FOXM1 antibody and mouse anti-Beta Tubulin antibody overnight at 4oC. DyLight 488 Conjugated Goat Anti-Rabbit IgG and DyLight 550 Conjugated Goat Anti-Mouse IgG were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Western blot analysis of FOXM1 using anti-FOXM1 antibody. Lane 1: human Hela whole cell lysates, Lane 2: human DLD-1 whole cell lysates, Lane 3: human MCF-7 whole cell lysates, Lane 4: human U2OS whole cell lysates, Lane 5: rat thymus tissue lysates, Lane 6: rat testis tissue lysates, Lane 7: mouse thymus tissue lysates, Lane 8: mouse testis tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-FOXM1 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. The expected band size for FOXM1 is at 85-100 kDa (multiple isoforms).



Flow Cytometry analysis of Hela cells using anti-FOXM1 antibody. Overlay histogram showing Hela cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-FOXM1 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

Description

FOXM1 antibody detects Forkhead box protein M1, encoded by the FOXM1 gene on chromosome 12p13.33. FOXM1 antibody is widely used in studies of cell cycle regulation, transcription, and cancer biology. FOXM1 is a member of the forkhead box (FOX) family of transcription factors, characterized by a conserved winged-helix DNA-binding domain. It plays critical roles in G1/S and G2/M transitions of the cell cycle, controlling genes required for DNA replication, mitosis, and cytokinesis. Expression is high in proliferating cells and embryonic tissues, but normally downregulated in differentiated, non-dividing cells.

Structurally, FOXM1 contains an N-terminal repressor domain, a central forkhead DNA-binding domain, and a C-terminal transactivation domain. Its activity is regulated by phosphorylation, with cyclin-CDK complexes and MAPKs activating FOXM1 during the cell cycle. Alternative splicing produces isoforms with distinct transcriptional activities, including FOXM1a (inactive), FOXM1b, and FOXM1c (active in proliferation).

Functionally, FOXM1 drives expression of cell cycle regulators such as cyclin B1, cyclin D1, PLK1, and Aurora B kinase. It ensures proper chromosome segregation, spindle assembly, and DNA repair. Loss of FOXM1 impairs proliferation and causes mitotic defects, while overexpression accelerates tumorigenesis. Researchers use FOXM1 antibody to study transcriptional regulation, cell cycle control, and tumor progression.

Clinically, FOXM1 is strongly associated with cancer. Overexpression occurs in breast, liver, prostate, lung, and brain tumors, correlating with aggressive phenotypes and poor prognosis. FOXM1 promotes tumor growth by enhancing proliferation, metastasis, angiogenesis, and therapy resistance. Targeting FOXM1 is an emerging therapeutic strategy, with inhibitors under development. Beyond oncology, FOXM1 also participates in tissue repair, stem cell biology, and aging processes. NSJ Bioreagents provides FOXM1 antibody for use in oncology, stem cell, and regenerative medicine research.

Experimentally, FOXM1 antibody is applied in western blotting to detect the ~80Ã¯Â¿Â½90 kDa protein, in immunohistochemistry to assess tumor expression, and in immunofluorescence microscopy to study nuclear localization. ChIP assays using FOXM1 antibody help identify direct gene targets of this transcription factor.

Application Notes

Optimal dilution of the FOXM1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human FOXM1 recombinant protein (Position: K48-Q763) was used as the immunogen for the FOXM1 antibody.

Storage

After reconstitution, the FOXM1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.