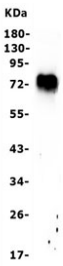
FOXC1 Antibody / Forkhead Transcription Factor Antibody (RQ5578)

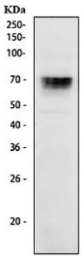
Catalog No.	Formulation	Size
RQ5578	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

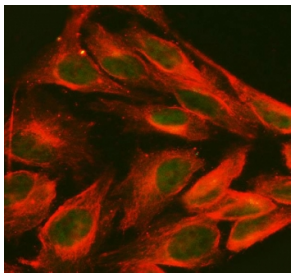
Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q12948
Applications	Western blot: 0.5-1ug/ml Immunofluorescence: 5ug/ml Direct ELISA: 0.1-0.5ug/ml
Limitations	This FOXC1 Antibody / Forkhead Transcription Factor Antibody is available for research use only.



FOXC1 Antibody WB. Western blot analysis of human HEK293 cell lysate using FOXC1 Antibody / Forkhead Transcription Factor Antibody demonstrates a prominent immunoreactive band at approximately 70-75 kDa, consistent with expression of FOXC1. Although the predicted molecular weight of FOXC1 is approximately 57 kDa, the protein is frequently observed at higher apparent molecular weights due to post-translational modifications, including phosphorylation and other regulatory modifications that influence electrophoretic mobility. FOXC1 is a forkhead box transcription factor that regulates gene expression programs involved in embryonic development, tissue patterning, cellular differentiation, and stem cell-associated signaling pathways. The observed banding pattern is consistent with endogenous FOXC1 expression in human cells. Predicted molecular weight: approximately 57 kDa. Commonly observed molecular weight: up to 75 kDa.



FOXC1 Antibody 293T Cell WB. Western blot analysis of human 293T cell lysate using FOXC1 Antibody / Forkhead Transcription Factor Antibody demonstrates a distinct immunoreactive band at approximately 70-75 kDa, consistent with expression of FOXC1. Although the predicted molecular weight of FOXC1 is approximately 57 kDa, the protein is frequently observed at higher apparent molecular weights due to post-translational modifications that affect electrophoretic mobility. FOXC1 is a forkhead box transcription factor that regulates gene expression programs involved in embryonic development, tissue patterning, cellular differentiation, stem cell maintenance, and organogenesis. The observed banding pattern is consistent with endogenous FOXC1 expression in human 293T cells. Predicted molecular weight: approximately 57 kDa. Commonly observed molecular weight: up to 75 kDa.



FOXC1 Antibody IF. Immunofluorescent staining of FFPE human HeLa cells using FOXC1 Antibody / Forkhead Transcription Factor Antibody demonstrates green fluorescence localized predominantly within cell nuclei, consistent with the expected localization of FOXC1 as a DNA-binding transcription factor. FOXC1 regulates gene expression programs involved in embryonic development, cellular differentiation, tissue patterning, and stem cell-associated signaling pathways. Co-staining with Alpha Tubulin monoclonal antibody (red) highlights the cytoskeletal network and provides cellular context for nuclear FOXC1 expression. HIER was performed by steaming sections in pH 6 citrate buffer for 20 minutes prior to immunofluorescent staining. Green = FOXC1 antibody; Red = Alpha Tubulin monoclonal antibody; nuclei appear green due to nuclear FOXC1 localization.

Description

FOXC1 Antibody / Forkhead Transcription Factor Antibody detects FOXC1, a member of the forkhead box (FOX) family of transcription factors and a critical regulator of embryonic development, cellular differentiation, and tissue morphogenesis. FOXC1 functions as a DNA-binding transcriptional regulator that controls gene expression programs involved in organ formation, tissue patterning, cellular migration, and maintenance of developmental identity. FOXC1 Antibody is widely used to investigate developmental biology, transcriptional regulation, stem cell function, and disease-associated alterations in gene expression.

FOXC1 contains a highly conserved forkhead DNA-binding domain that enables interaction with specific promoter and enhancer regions of target genes. Through transcriptional regulation of downstream signaling networks, FOXC1 contributes to the coordinated development of multiple organ systems and influences cellular behaviors required for tissue organization and morphogenesis. These activities place FOXC1 among the key developmental transcription factors governing vertebrate development.

FOXC1 plays important roles in neural crest biology, craniofacial development, ocular formation, cardiovascular development, mesenchymal differentiation, and maintenance of tissue architecture. Expression of FOXC1 has been documented in a variety of embryonic and adult tissues where it contributes to regulation of cellular identity and tissue-specific gene expression programs. Because of its broad developmental functions, FOXC1 serves as a valuable marker for studies of lineage specification and developmental signaling pathways.

Beyond embryogenesis, FOXC1 remains active in adult tissues where it contributes to cellular homeostasis, stem cell regulation, tissue remodeling, and responses to physiological stress. Researchers frequently utilize FOXC1 Antibody to investigate mechanisms of cellular plasticity, differentiation, and transcriptional control in both normal and disease-associated biological processes.

Altered FOXC1 expression has been associated with numerous pathological conditions, including developmental disorders, fibrosis, cardiovascular disease, and multiple forms of cancer. Dysregulated FOXC1 activity may influence tumor progression, epithelial-mesenchymal transition, invasion, metastasis, and therapeutic response. As a result,

FOXC1 has become an important target in both developmental biology and cancer research.

FOXC1 Antibody / Forkhead Transcription Factor Antibody is useful for researchers studying developmental biology, transcriptional regulation, stem cell biology, neural crest development, tissue patterning, cancer progression, epithelial-mesenchymal transition, and organogenesis. Validation may include immunohistochemistry, western blotting, immunofluorescence, flow cytometry, and related protein expression applications when supported by experimental data.

Explore our Stem Cell Antibodies page for additional markers involved in developmental regulation, cellular differentiation, tissue patterning, and stem cell biology.

Application Notes

Optimal dilution of the FOXC1 Antibody / Forkhead Transcription Factor Antibody should be determined by the researcher.

Immunogen

A human recombinant protein (amino acids T392-F554) was used as the immunogen for the FOXC1 antibody.

Storage

After reconstitution, the FOXC1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

FOXC1 Antibody, Forkhead Box C1 Antibody, Forkhead Transcription Factor Antibody, Forkhead Box Protein C1 Antibody, Winged Helix Transcription Factor Antibody, Mesenchymal Development Protein Antibody

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