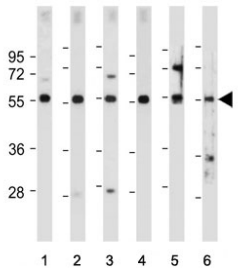
FOXD1 Antibody / Developmental Transcription Factor Antibody (F55106)

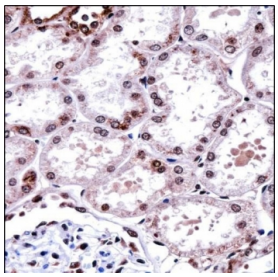
Catalog No.	Formulation	Size
F55106-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F55106-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

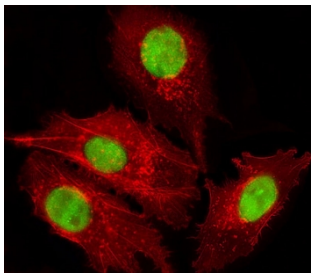
Availability	1-3 business days
Species Reactivity	Human, Mouse
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity
UniProt	Q16676
Localization	Nuclear
Applications	Western Blot : 1:1000-1:2000 Immunohistochemistry (FFPE) : 1:10-1:50 Immunofluorescence : 1:25
Limitations	This FOXD1 Antibody / Developmental Transcription Factor Antibody is available for research use only.



FOXD1 Antibody Human and Mouse WB. Western blot analysis of human HEK293, U-2 OS, U-87 MG, and Y79 cell lysates, as well as mouse kidney and mouse eyeball tissue lysates, using FOXD1 antibody demonstrates detection of a prominent immunoreactive band at approximately 46-55 kDa, consistent with expression of Forkhead Box Protein D1 (FOXD1). FOXD1 is a developmental transcription factor that regulates gene expression programs involved in tissue patterning, cellular differentiation, and organogenesis. The observed expression across both cultured cell lines and mouse tissues is consistent with the role of FOXD1 in developmental regulatory networks and maintenance of tissue-specific gene expression programs. Predicted molecular weight: ~46 kDa.



FOXD1 Antibody Human Kidney IHC. Immunohistochemistry staining of FFPE human kidney tissue using FOXD1 antibody demonstrates prominent nuclear staining within renal tubular epithelial cells, consistent with expression of Forkhead Box Protein D1 (FOXD1). FOXD1 is a developmental transcription factor that regulates gene expression programs involved in tissue patterning, cellular differentiation, and maintenance of specialized cellular identities. The observed nuclear localization is consistent with the role of FOXD1 as a DNA-binding transcriptional regulator and supports its involvement in developmental and tissue-specific regulatory pathways within the kidney. HIER: steam section in pH6 citrate buffer for 20 min and allow to cool prior to staining.



FOXD1 Antibody HepG2 Cell IF. Immunofluorescent staining of fixed and permeabilized human HepG2 cells using FOXD1 antibody demonstrates strong nuclear localization of Forkhead Box Protein D1 (FOXD1), shown in green. FOXD1 is a developmental transcription factor that regulates gene expression programs involved in cellular differentiation, tissue patterning, and organogenesis. The observed nuclear staining pattern is consistent with the role of FOXD1 as a DNA-binding transcriptional regulator controlling developmental and tissue-specific gene expression networks. Phalloidin staining (red) highlights the actin cytoskeleton and provides contrast to the predominantly nuclear distribution of FOXD1. These findings support the utility of FOXD1 antibody for studies of developmental biology, transcriptional regulation, and cellular differentiation pathways.

Description

FOXD1 Antibody / Developmental Transcription Factor Antibody is designed for the detection and study of FOXD1 (Forkhead Box Protein D1), a member of the forkhead family of transcription factors that regulate gene expression during embryonic development and tissue differentiation. FOXD1 functions as a DNA-binding regulatory protein that coordinates developmental gene expression programs required for tissue patterning, cellular specification, and organ formation. Through these activities, FOXD1 serves as an important regulator of vertebrate development and tissue organization.

As a developmental transcription factor, FOXD1 controls expression of genes involved in cellular differentiation, regional tissue identity, and morphogenesis. Members of the forkhead transcription factor family are recognized as critical regulators of developmental processes that govern how cells acquire specialized functions and organize into complex tissues. FOXD1 contributes to these pathways by helping establish spatial and temporal patterns of gene expression necessary for normal embryonic growth and tissue maturation.

FOXD1 has been implicated in developmental pathways involving organogenesis, mesenchymal differentiation, tissue specification, and establishment of normal tissue architecture. Because transcription factors occupy central positions within gene regulatory networks, FOXD1 influences numerous downstream signaling pathways that coordinate cellular behavior during development. Its expression has therefore become an important marker for studies examining how developmental programs regulate tissue formation and maintenance.

Beyond embryonic development, FOXD1 continues to attract interest in research involving stem cell biology, tissue regeneration, cellular plasticity, and disease-associated alterations in gene expression. Changes in transcriptional regulatory networks can profoundly influence cell fate decisions and tissue organization, making FOXD1 an important target for investigations of developmental biology and molecular regulation. Researchers frequently examine FOXD1 as part of broader efforts to understand mechanisms governing differentiation and tissue-specific gene expression.

As a developmental transcription factor, FOXD1 serves as a key regulator linking developmental signaling pathways to gene expression programs that shape tissue identity and structure. Its role in coordinating cellular differentiation and tissue patterning has established FOXD1 as a valuable research marker for studies of development, organ formation, and transcriptional regulation across multiple biologic systems.

FOXD1 Antibody is useful for investigating developmental biology, organogenesis, cellular differentiation, tissue patterning, and transcriptional regulation pathways. Researchers utilize FOXD1 Antibody reagents to evaluate protein expression patterns and study molecular mechanisms governing developmental gene regulation, tissue organization, and maintenance of specialized cellular identities.

Explore additional antibodies to developmental transcription factors, gene regulation proteins, and chromatin-associated regulators on our Epigenetics Antibodies page.

Application Notes

The stated application concentrations are suggested starting points. Titration of the FOXD1 Antibody / Developmental Transcription Factor Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 1-30 from the human protein was used as the immunogen for the FOXD1 antibody.

Storage

Aliquot the FOXD1 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

FOXD1 Antibody, Forkhead Box Protein D1 Antibody, Developmental Transcription Factor Antibody, Forkhead Transcription Factor Antibody, Organogenesis Regulatory Protein Antibody, Developmental Regulatory Protein Antibody, FOX Family Protein Antibody