10320 Camino Santa Fe, Suite G
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FOXA1 Antibody (clone 2D7)

Mouse Monoclonal Antibody

Catalog # ALS14386

Specification

FOXA1 Antibody (clone 2D7) - Product Information

Application	**WB, IHC**
Primary Accession	P55317
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Calculated MW	**49kDa KDa**

FOXA1 Antibody (clone 2D7) - Additional Information

Gene ID 3169

Other Names
Hepatocyte nuclear factor 3-alpha, HNF-3-alpha, HNF-3A, Forkhead box protein A1, Transcription factor 3A, TCF-3A, FOXA1, HNF3A, TCF3A

Target/Specificity
Human FOXA1

Reconstitution & Storage
Aliquot and store at -20°C or -80°C. Avoid freeze-thaw cycles.

Precautions
FOXA1 Antibody (clone 2D7) is for research use only and not for use in diagnostic or therapeutic procedures.

FOXA1 Antibody (clone 2D7) - Protein Information

Name FOXA1

Synonyms HNF3A, TCF3A

Function
Transcription factor that is involved in embryonic development, establishment of tissue-specific gene expression and regulation of gene expression in differentiated tissues. Is thought to act as a 'pioneer' factor opening the compacted chromatin for other proteins through interactions with nucleosomal core histones and thereby replacing linker histones at target enhancer and/or promoter sites. Binds DNA with the consensus sequence 5'- [AC]A[AT]T[AG]TT[GT][AG][CT]T[CT]-3' (By similarity). Proposed to play a role in translating the epigenetic signatures into cell type-specific enhancer-driven transcriptional programs. Its differential recruitment to chromatin is dependent on distribution of histone H3 methylated at 'Lys-5' (H3K4me2) in estrogen-regulated genes. Involved in the development of multiple endoderm-derived organ systems such as liver, pancreas, lung and prostate; FOXA1 and FOXA2 seem to have at least in part redundant roles (By

similarity). Modulates the transcriptional activity of nuclear hormone receptors. Is involved in ESR1-mediated transcription; required for ESR1 binding to the NKX2-1 promoter in breast cancer cells; binds to the RPRM promoter and is required for the estrogen-induced repression of RPRM. Involved in regulation of apoptosis by inhibiting the expression of BCL2. Involved in cell cycle regulation by activating expression of CDKN1B, alone or in conjunction with BRCA1. Originally described as a transcription activator for a number of liver genes such as AFP, albumin, tyrosine aminotransferase, PEPCK, etc. Interacts with the cis-acting regulatory regions of these genes. Involved in glucose homeostasis.

Cellular Location
Nucleus {ECO:0000255|PROSITE-ProRule:PRU00089, ECO:0000269|PubMed:15987773, ECO:0000269|PubMed:16331276}

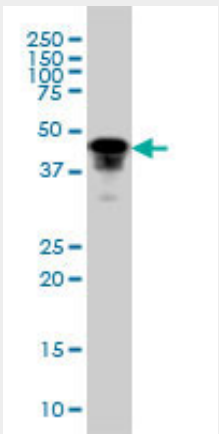
Tissue Location
Highly expressed in prostate and ESR1-positive breast tumors. Overexpressed in esophageal and lung adenocarcinomas

FOXA1 Antibody (clone 2D7) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

FOXA1 Antibody (clone 2D7) - Images



Western blot of FOXA1 expression in HepG2 cell lysate.

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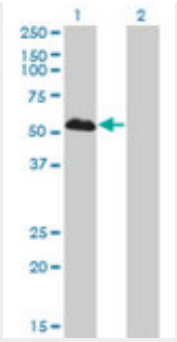
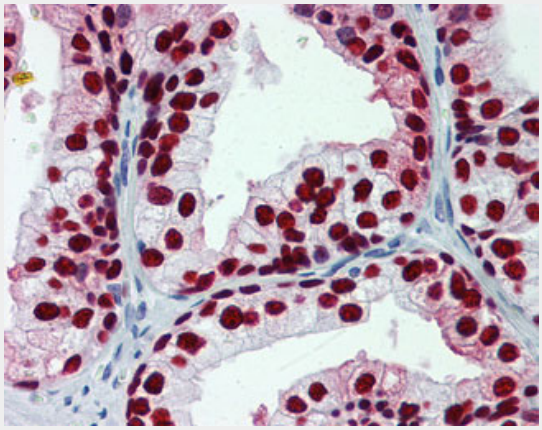


Western blot of FOXA1 expression in transfected 293T cell line by FOXA1 monoclonal antibody.



Anti-FOXA1 antibody IHC of human prostate.

FOXA1 Antibody (clone 2D7) - Background

Transcription factor that is involved in embryonic development, establishment of tissue-specific gene expression and regulation of gene expression in differentiated tissues. Is thought to act as a 'pioneer' factor opening the compacted chromatin for other proteins through interactions with nucleosomal core histones and thereby replacing linker histones at target enhancer and/or promoter sites. Binds DNA with the consensus sequence 5'-[AC]A[AT]T[AG]TT[GT][AG][CT]T[CT]-3' (By similarity). Proposed to play a role in translating the epigenetic signatures into cell type-specific enhancer-driven transcriptional programs. Its differential recruitment to chromatin is dependent on distribution of histone H3 methylated at 'Lys-5' (H3K4me2) in estrogen-regulated genes. Involved in the development of multiple endoderm-derived organ systems such as liver, pancreas, lung and prostate; FOXA1 and FOXA2 seem to have at least in part redundant roles (By similarity). Modulates the transcriptional activity of nuclear hormone receptors. Is involved in ESR1-mediated transcription; required for ESR1 binding to the NKX2-1 promoter in breast cancer cells; binds to the RPRM promter and is required for the estrogen-induced repression of RPRM. Involved in regulation of apoptosis by inhibiting the expression of BCL2. Involved in cell cycle regulation by activating expression of CDKN1B, alone or in conjunction with BRCA1. Originally described as a transcription activator for a number of liver genes such as AFP, albumin, tyrosine aminotransferase, PEPCK, etc. Interacts with the cis- acting regulatory regions of these genes. Involved in glucose homeostasis.

FOXA1 Antibody (clone 2D7) - References

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Navas M.A.,et al.Hum. Hered. 50:370-381(2000).
Yu L.,et al.Submitted (SEP-2000) to the EMBL/GenBank/DDBJ databases.
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