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KD-Validated Anti-Forkhead box A1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI2329

Specification

KD-Validated Anti-Forkhead box A1 Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	P55317
Reactivity	**Rat, Human**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 4 9 kDa , observed, 4 9 kDa KDa**
Gene Name	**FOXA1**
Aliases	**FOXA1; Forkhead Box A1; HNF3A; Hepatocyte Nuclear Factor 3-Alpha; Forkhead Box Protein A1; Transcription Factor 3A; HNF-3-Alpha; HNF-3A; TCF-3A; TCF3A; Hepatocyte Nuclear Factor 3, Alpha**
Immunogen	**A synthesized peptide derived from human FOXA1**

KD-Validated Anti-Forkhead box A1 Rabbit Monoclonal Antibody - 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

KD-Validated Anti-Forkhead box A1 Rabbit Monoclonal Antibody - 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}

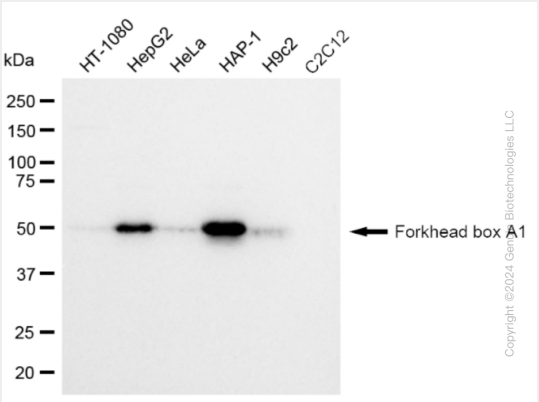
Tissue Location
Highly expressed in prostate and ESR1-positive breast tumors. Overexpressed in esophageal and lung adenocarcinomas

KD-Validated Anti-Forkhead box A1 Rabbit Monoclonal Antibody - 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

KD-Validated Anti-Forkhead box A1 Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-Forkhead box A1 antibody (Cat#AGI2329). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-Forkhead box A1 antibody (Cat#AGI2329, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.

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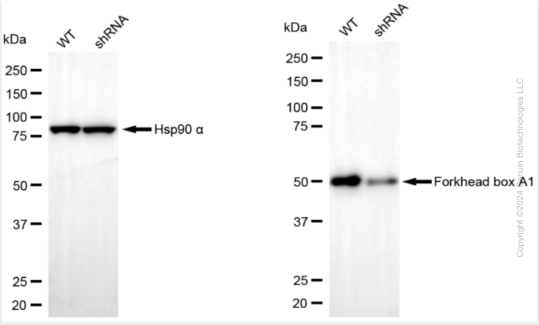
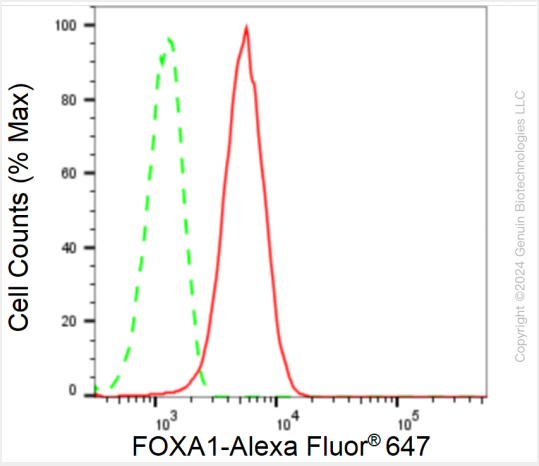
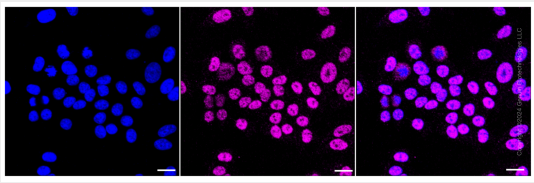


Western blotting analysis using anti-forkhead box A1 antibody (Cat#AGI2329). Forkhead box A1 expression in wild-type (WT) and forkhead box A1 (FOXA1) shRNA knockdown (KD) HepG2 cells with 30 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-forkhead box A1 antibody (Cat#AGI2329, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of FOXA1 expression in HepG2 cells using anti-FOXA1 antibody (Cat#AGI2329, 1:2,000). Green, isotype control; red, FOXA1.



Immunocytochemical staining of HepG2 cells with Forkhead box A1 antibody (Cat#AGI2329, 1:1,000). Nuclei were stained blue with DAPI; Forkhead box A1 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.