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# Anti-FOXA1 / HNF3A Antibody

Mouse Monoclonal Antibody
Catalog # AH13297

## Product Information

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| **Application** | WB, IHC-P, IF, FC |
| **Primary Accession** | P55317 |
| **Other Accession** | 163484 |
| **Reactivity** | Human, Rat |
| **Host** | Mouse |
| **Clonality** | Monoclonal |
| **Isotype** | Mouse / IgG2b, kappa |
| **Clone Names** | FOXA1/1241 |
| **Calculated MW** | 49148 |

## Additional Information

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| **Gene ID** | 3169 |
| **Other Names** | Forkhead box protein A1 (FOXA1); Hepatocyte nuclear factor 3-alpha (HNF-3-alpha or HNF-3A or HNF3A); Transcription factor 3A (TCF-3A or TCF3A) |
| **Application Note** | Flow Cytometry (0.5-1ug/million cells); Immunofluorescence (0.5-1ug/ml); ,Western Blotting (0.5-1ug/ml); ,Immunohistology (Formalin-fixed) (0.5-1.0ug/ml for 30 minutes at RT),(Staining of formalin-fixed tissues is enhanced by boiling tissue sections in 10mM Tris with 1mM EDTA, pH 9.0 for 10-20 min followed by cooling at RT for 20 minutes),Optimal dilution for a specific application should be determined. |
| **Format** | 200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml. |
| **Storage** | Store at 2 to 8°C.Antibody is stable for 24 months. |
| **Precautions** | Anti-FOXA1 / HNF3A Antibody is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

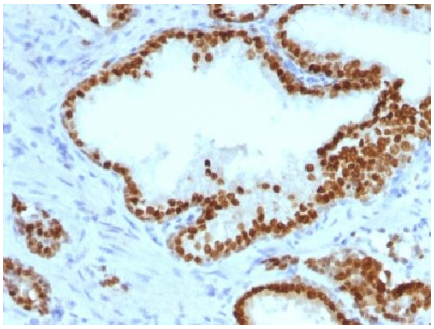
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| **Name** | FOXA1 |
| **Synonyms** | HNF3A, TCF3A |
| **Function** | Transcription factor that is involved in embryonic development, establishment of tissue-specific gene expression and regulation of gene |

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| | 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 |

## Background

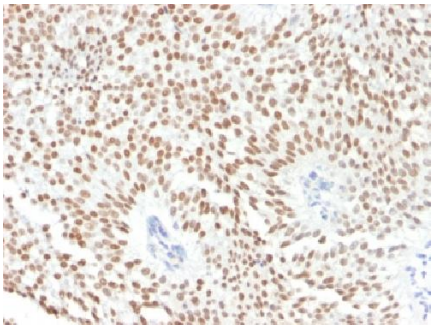
The transcription factor Forkhead-box A1 (FOXA1), also known as hepatocyte nuclear factor 3-alpha, is a member of the FOX class of transcription factors. HNF-1 (α and β), HNF-3 (α, β and γ), HNF-4 (α and γ), and HNF-6 compose, in part, a homeoprotein family designated the hepatocyte nuclear factor family. The various HNF-1 isoforms regulate transcription of genes in the liver as well as in other tissues such as kidney, small intestine and thymus. FOXA1 is expressed in normal breast ductal epithelium and other epithelium in different organs, such as lung, pancreas, bladder, prostate, and colon. Recently, FOXA1 has been shown to be a major determinant of estrogen-ER activity and endocrine response in breast cancer cells. FOXA1 expression correlates with estrogen receptor (ER)-positivity, especially in luminal subtype A breast cancers, which is associated with favorable prognosis. FOXA1 is useful in the sub-classification of breast carcinomas.

## Images



Formalin-paraffin human Prostate Carcinoma stained with FOXA1 Monoclonal Antibody (FOXA1/1241).

Formalin-paraffin human Bladder Carcinoma stained with FOXA1 Monoclonal Antibody (FOXA1/1241).



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.