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# FOXA2 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1311a

## Product Information

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| **Application** | WB, IHC, E |
| **Primary Accession** | Q9Y261 |
| **Reactivity** | Human |
| **Host** | Mouse |
| **Clonality** | Monoclonal |
| **Clone Names** | 7H4B7 |
| **Isotype** | IgG1 |
| **Calculated MW** | 48306 |
| **Description** | FOXA2 (forkhead box A2), also known as HNF3B (hepatocyte nuclear factor 3, beta). It is a member of the forkhead class of DNA-binding proteins. These hepatocyte nuclear factors are transcriptional activators for liver-specific genes such as albumin and transthyretin, and they also interact with chromatin. Similar family members in mice have roles in the regulation of metabolism and in the differentiation of the pancreas and liver. FOXA2 has been linked to sporadic cases of maturity-onset diabetes of the young. Transcript variants encoding different isoforms have been identified for FOXA2. |
| **Immunogen** | Purified recombinant fragment of FOXA2 expressed in E. Coli. |
| **Formulation** | Ascitic fluid containing 0.03% sodium azide. |

## Additional Information

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| **Gene ID** | 3170 |
| **Other Names** | Hepatocyte nuclear factor 3-beta, HNF-3-beta, HNF-3B, Forkhead box protein A2, Transcription factor 3B, TCF-3B, FOXA2, HNF3B, TCF3B |
| **Dilution** | WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 E~~N/A |
| **Storage** | Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| **Precautions** | FOXA2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | FOXA2 |

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| **Synonyms** | HNF3B, TCF3B |
| **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). In embryonic development is required for notochord formation. Involved in the development of multiple endoderm-derived organ systems such as the liver, pancreas and lungs; FOXA1 and FOXA2 seem to have at least in part redundant roles. 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; regulates the expression of genes important for glucose sensing in pancreatic beta- cells and glucose homeostasis. Involved in regulation of fat metabolism. Binds to fibrinogen beta promoter and is involved in IL6- induced fibrinogen beta transcriptional activation. |
| **Cellular Location** | Nucleus {ECO:0000255\|PROSITE-ProRule:PRU00089, ECO:0000269\|PubMed:14500912}. Cytoplasm Note=Shuttles between the nucleus and cytoplasm in a CRM1-dependent manner; in response to insulin signaling via AKT1 is exported from the nucleus |

## References

1. Hepatology. 2008 Aug;48(2):597-606. 2. Cancer Res. 2004 Jun 15;64(12):4137-47.

## Images

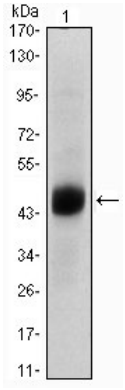



Figure 1: Western blot analysis using FOXA2 mouse mAb against A549 (1) cell lysate.

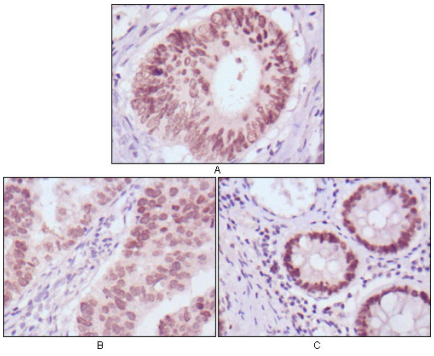
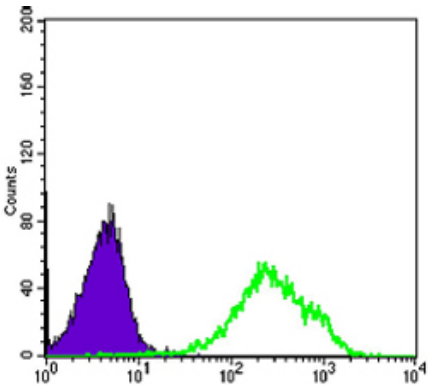



Figure 2: Immunohistochemical analysis of paraffin-embedded human colon cancer (A), gastric cancer (B) and rectal cancer (C) tissues using FOXA2 mouse mAb with DAB staining.

Figure 4: Flow cytometric analysis of Hela cells using




DAXX mouse mAb (green) and negative control (purple).

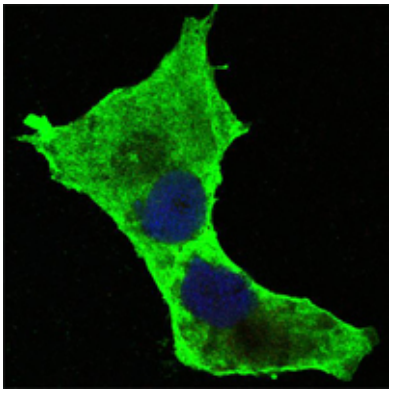


Figure 2: Confocal immunofluorescence analysis of PANC-1 cells using DAXX mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye.

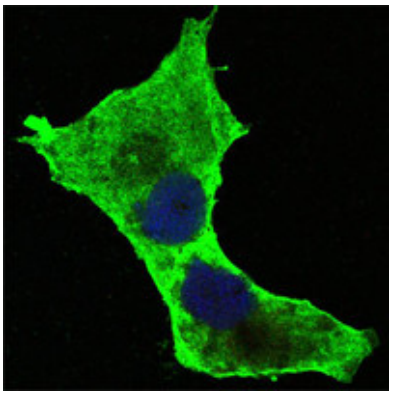


Figure 2: Confocal immunofluorescence analysis of PANC-1 cells using anti-DAXX mAb (green). Blue: DRAQ5 fluorescent DNA dye.

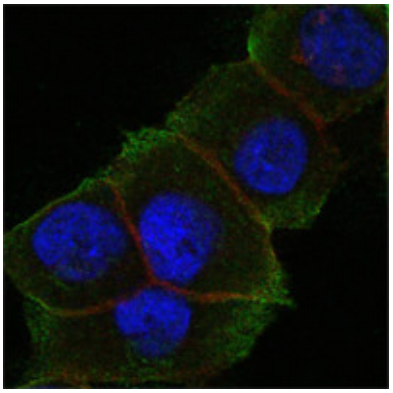


Figure 3: Confocal immunofluorescence analysis of Hela cells using anti-DAXX mAb (green). Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin. Blue: DRAQ5 fluorescent DNA dye.