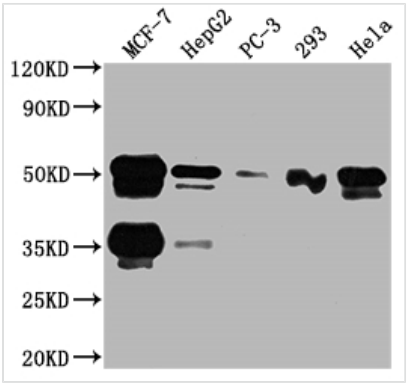
FOXA1 Antibody

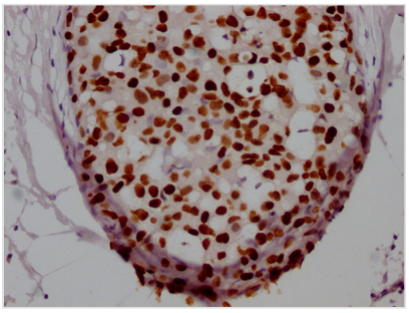
Product Code	CSB-RA246102A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P55317
Immunogen	A synthesized peptide derived from human FOXA1
Species Reactivity	Human
Tested Applications	ELISA, WB, IHC, IP; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200, IP:1:200-1:1000
Relevance	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.
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Epigenetics and Nuclear Signaling

Gene Names	FOXA1
Accession NO.	3B2

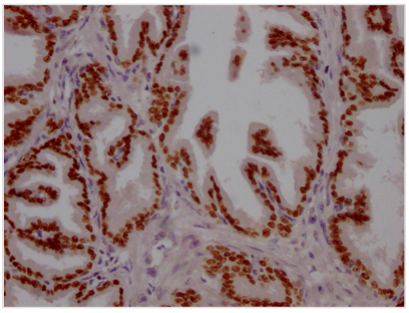
Image



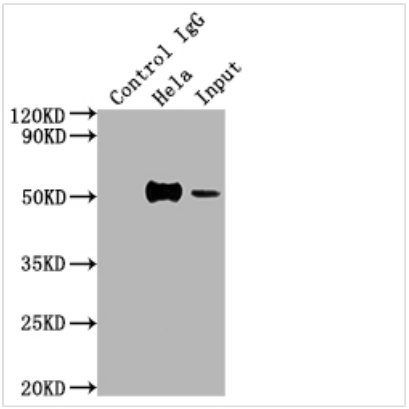
Western Blot
Positive WB detected in: MCF-7 whole cell lysate, HepG2 whole cell lysate, PC-3 whole cell lysate, 293 whole cell lysate, Hela whole cell lysate
All lanes: FOXA1 antibody at 1:2000
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 50, 46 kDa
Observed band size: 50 kDa



IHC image of CSB-RA246102A0HU diluted at 1:100 and staining in paraffin-embedded human breast cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.



IHC image of CSB-RA246102A0HU diluted at 1:100 and staining in paraffin-embedded human prostate tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.



Immunoprecipitating FOXA1 in Hela whole cell lysate
Lane 1: Rabbit control IgG instead of CSB-RA246102A0HU in Hela whole cell lysate. For western blotting,a HRP-conjugated Protein G antibody was used as the secondary antibody (1/2000)
Lane 2: CSB-RA246102A0HU(2μg)+ Hela whole cell lysate(500μg)
Lane 3: Hela whole cell lysate (10μg)

Description

FOXA1, also known as HNF-3α, is a pioneering androgen receptor (AR)

transcription factor that is essential for prostate lineage-specific gene expression. It is important for the differentiation and development of epithelial cells in a variety of organs, including the pancreatic, prostate, and breast. The expression of the FOXA1 protein was shown to be higher in breast cancer cells as the estrogen/androgen receptors were activated. FOXA1 has been demonstrated to suppress epithelial-to-mesenchymal transition (EMT) in pancreatic cancer cells, indicating that it is a pro-differentiation factor.

The production of this recombinant FOXA1 antibody started with identifying and cloning the genes for antibody expression. After the FOXA1 antibody was cloned into an expression plasmid, the plasmid could be introduced into the mammalian cell to produce the target recombinant antibody. This recombinant FOXA1 antibody has been validated in ELISA, WB, IHC, IP.