For Research Use Only

FOXA1 Polyclonal antibody

Catalog Number:20411-1-AP 21 Publications

proteintech®
Antibodies | ELISA kits | Proteins
www.ptglab.com

Basic Information

Catalog Number:
20411-1-AP

Source:
Rabbit

Isotype:
IgG

Immunogen Catalog Number:
AG14243

GenBank Accession Number:
BC033890

GeneID (NCBI):
3169

UNIPROT ID:
P55317

Full Name:
forkhead box A1

Calculated MW:
473 aa, 49 kDa

Observed MW:
50 kDa

Purification Method:
Antigen affinity purification

Recommended Dilutions:
WB: 1:1000-1:4000
IHC: 1:50-1:500
IF/ICC: 1:50-1:500
FC (Intra): 0.25 ug per 10^6 cells in a 100 ul suspension

Applications

Tested Applications:
WB, IHC, IF/ICC, ELISA

Cited Applications:
WB, IHC, IF, IP, CoIP, ChIP

Species Specificity:
human

Cited Species:
human, mouse

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:

WB : MCF-7 cells, HepG2 cells, MDA-MB-468 cells and T-47D cells.

IHC : human urothelial carcinoma tissue,

IF/ICC : MCF-7 cells,

FC (Intra) : HepG2 cells,

Background Information

Forkhead box A1(FOXA1),also named hepatocyte nuclear factor 3-alpha (HNF-3A), is a 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 discribed 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.

Notable Publications

Author	Pubmed ID	Journal	Application
Zipeng Xie	32931885	Cancer Lett	WB
Lijun Li	36064451	Stem Cell Res Ther	WB
Wentao Liu	35081978	J Exp Clin Cancer Res	WB

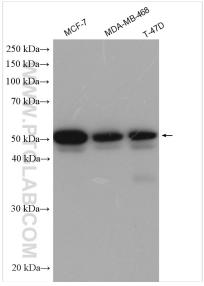
Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol, pH 7.3.
Aliquoting is unnecessary for -20°C storage

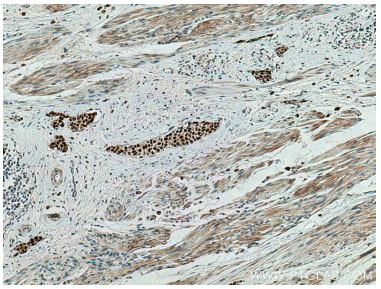
For technical support and original validation data for this product please contact:
T: 4006900926 E: Proteintech-CN@ptglab.com W: ptgcn.com

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

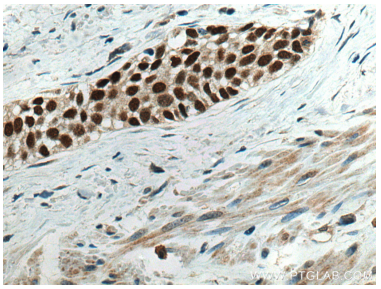
Selected Validation Data



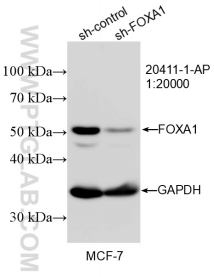
Various lysates were subjected to SDS PAGE followed by western blot with 20411-1-AP (FOXA1 antibody) at dilution of 1:2000 incubated at room temperature for 1.5 hours.



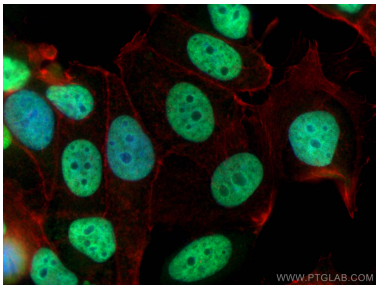
Immunohistochemical analysis of paraffin-embedded human urothelial carcinoma tissue slide using 20411-1-AP (FOXA1 antibody) at dilution of 1:200 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



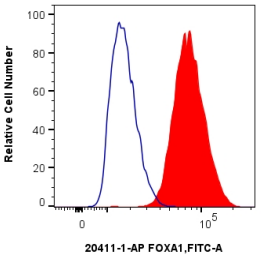
Immunohistochemical analysis of paraffin-embedded human urothelial carcinoma tissue slide using 20411-1-AP (FOXA1 antibody) at dilution of 1:200 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



WB result of FOXA1 antibody (20411-1-AP; 1:20000; incubated at room temperature for 1.5 hours) with sh-Control and sh-FOXA1 transfected MCF-7 cells.



Immunofluorescent analysis of (4% PFA) fixed MCF-7 cells using FOXA1 antibody (20411-1-AP) at dilution of 1:200 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L), CL594-phalloidin (red).



1x10^6 HepG2 cells were intracellularly stained with 0.25 ug FOXA1 Polyclonal antibody (20411-1-AP) and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2)(red), or 0.25 ug Isotype Control (blue). Cells were fixed and permeabilized with Transcription Factor Staining Buffer Kit (PF00011).