10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

FOXA2 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12031b

Product Information

Application	IHC-P, IF, WB, E
Primary Accession	Q9Y261
Other Accession	P35583, NP_068556.2
Reactivity	Human, Rat, Mouse
Predicted	Mouse, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	48306
Antigen Region	380-407

Additional Information

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
Target/Specificity	This FOXA2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 380-407 amino acids from the C-terminal region of human FOXA2.
Dilution	IHC-P~~1:100~500 IF~~1:10~50 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	FOXA2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	FOXA2
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

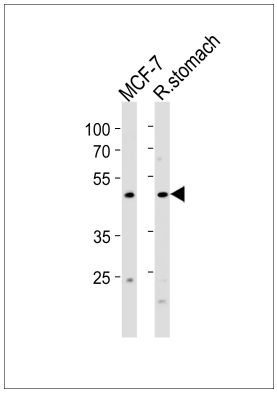
Background

This gene encodes 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. This gene has been linked to sporadic cases of maturity-onset diabetes of the young. Transcript variants encoding different isoforms have been identified for this gene.

References

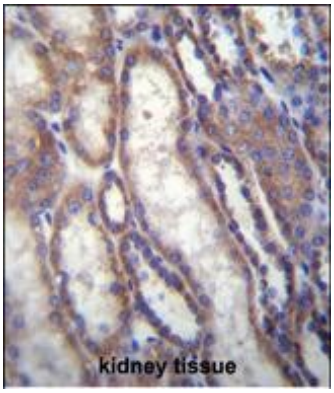
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Dayoub, R., et al. Biochem. Biophys. Res. Commun. 395(4):465-470(2010)
Xing, C., et al. Am. J. Hum. Genet. 86(3):440-446(2010)
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Images

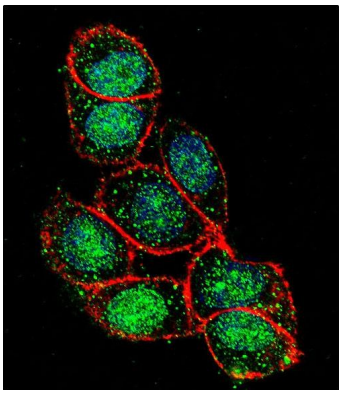


FOXA2 Antibody (C-term) (Cat. #AP12031b) western blot analysis in MCF-7 cell line and rat stomach tissue lysates (35ug/lane).This demonstrates the FOXA2 antibody detected the FOXA2 protein (arrow).

FOXA2 Antibody (C-term) (Cat. #AP12031b)immunohistochemistry analysis in formalin



fixed and paraffin embedded human kidney tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of FOXA2 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.



Confocal immunofluorescent analysis of FOXA2 Antibody (C-term)(Cat#AP12031b) with Hela cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green). Actin filaments have been labeled with Alexa Fluor 555 phalloidin (red).DAPI was used to stain the cell nuclear (blue).

Citations

- Differentiation of adult human retinal pigment epithelial cells into dopaminergic-like cells in vitro and in the recipient monkey brain.
- Activation of Wnt/β-catenin signalling via GSK3 inhibitors direct differentiation of human adipose stem cells into functional hepatocytes.

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