Forkhead Box A2 (FOXA2) ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	forkhead box A2 (FOXA2), ELISA Kit
Full Product Name	Human Hepatocyte nuclear factor 3-beta, FOXA2 ELISA Kit
Product Gene Name	FOXA2 elisa kit
Product Synonym Names	Human Hepatocyte nuclear factor 3-beta (FOXA2) ELISA kit; HNF3B; MGC19807; TCF3B; hepatic nuclear factor-3-beta; hepatocyte nuclear factor 3; beta; forkhead box A2
Species Reactivity	Human
Assay Type	Quantitative Sandwich
Samples	Undiluted original Human serum, plasma or tissue homogenates samples
Detection Range	0.625ng/ml-20ng/ml
Sensitivity	0.1ng/ml
Specificity	No significant cross-reactivity or interference between this analyte and analogues is observed.
Preparation and Storage	Store all reagents at 2-8 degree C
Inter-assay Precision	Inter-assay CV (%) is less than 15%. [CV(%) = SD/mean ×100]. All CV% should be compared by concentration, not compared by OD values.
Intra-assay Precision	Intra-assay CV (%) is less than 15%.
Molecular Weight	48,306 Da
OMIM	600288
3D Structure	ModBase 3D Structure for Q9Y261
Related Product Information for FOXA2 elisa kit	Background/Introduction: This Quantitative Sandwich ELISA kit is for lab reagent/research use only! This kit is intended to be used to determine the level of HNF3B (hereafter termed "analyte") in undiluted original Human serum, plasma or tissue homogenates samples. For other sample types please contact tech support to determine compatibility with this assay. This kit is not suitable for assaying non-biological sources of substances.
Other Notes	Small volumes of FOXA2 elisa kit vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for FOXA2 purchase	MBS9339371 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the forkhead box A2 (FOXA2) ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing FOXA2. The ELISA analytical biochemical technique of the MBS9339371 kit is based on FOXA2 antibody-FOXA2 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect FOXA2 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, FOXA2. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for FOXA2. It may not necessarily be applicable to this product.

NCBI GI #	194394143
NCBI GeneID	3170

NCBI Accession #	NP_068556.2
UniProt Primary Accession #	Q9Y261
UniProt Secondary Accession #	Q8WUW4; Q96DF7
UniProt Related Accession #	Q9Y261
GenBank Nucleotide #	NM_021784.4
NCBI Official Full Name	hepatocyte nuclear factor 3-beta isoform 1
NCBI Official Synonym Full Names	forkhead box A2
NCBI Official Symbol	FOXA2
NCBI Official Synonym Symbols	HNF3B; TCF3B
UniProt Protein Name	Hepatocyte nuclear factor 3-beta
UniProt Synonym Protein Names	Forkhead box protein A2; Transcription factor 3B; TCF-3B
Protein Family	Forkhead box protein
UniProt Gene Name	FOXA2
UniProt Synonym Gene Names	HNF3B; TCF3B; HNF-3-beta; HNF-3B; TCF-3B
UniProt Entry Name	FOXA2_HUMAN
NCBI Protein Information	hepatocyte nuclear factor 3-beta; HNF-3B; TCF-3B; HNF-3-beta; forkhead box protein A2; transcription factor 3B; hepatic nuclear factor-3-beta; hepatocyte nuclear factor 3, beta
NCBI Summary for FOXA2	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. [provided by RefSeq, Oct 2008]

UniProt Comments for FOXA2	FOXA2: 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'. 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 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; 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. Binds DNA as a monomer. Binds TLE1. Interacts with FOXA1 and FOXA3. Interacts with PRKDC. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Transcription factor; DNA-binding Chromosomal Location of Human Ortholog: 20p11 Cellular Component: cytoplasm; nucleus Molecular Function: protein domain specific binding; DNA binding; transcription factor binding; transcription factor activity Biological Process: transcription from RNA polymerase II promoter; in utero embryonic development; adult locomotory behavior; negative regulation of transcription factor activity; positive regulation of transcription, DNA-dependent; negative regulation of transcription from RNA polymerase II promoter by glucose; cell fate specification; chromatin modification; somite rostral/caudal axis specification; endocrine pancreas development; negative regulation of glucokinase activity; regulation of transcription from RNA polymerase II promoter; negative regulation of neuron differentiation; cell differentiation in hindbrain; positive regulation of embryonic development; ectoderm formation; regulation of steroid metabolic process; regulation of blood coagulation; positive regulation of smoothened signaling pathway; positive regulation of transcription from RNA polymerase III promoter; neuron fate specification; positive regulation of transcription from RNA polymerase II promoter; positive regulation of transcription from RNA polymerase II promoter by glucose; positive regulation of neuron differentiation; cell development; dorsoventral neural tube patterning
Research Articles on FOXA2	**1.** Knockdown of FoxO1 and ectopic expression of FoxA2 significantly decreased hepatitis C virus replication.
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