HNF1A Blocking Peptide – The purity is >90%,tested by HPLC and MS. Purity

PRODUCT OVERVIEW

Product Name	HNF1A, Blocking Peptide
Full Product Name	HNF1A Blocking Peptide
Product Gene Name	HNF1A blocking peptide
Product Synonym Names	Albumin proximal factor; Hepatic nuclear factor 1 alpha; Hepatic nuclear factor 1; Hepatic transcription factor 1 alpha; Hepatic transcription factor 1; Hepatocyte nuclear factor 1-alpha; HNF 1; HNF 1A; HNF-1-alpha; HNF-1A; hnf1a; HNF1A_HUMAN; Interferon production regulator factor; LF B1; LF B1 hepatic nuclear factor; LFB 1; LFB1; LFB1 hepatic nuclear factor; Liver specific transcription factor LF B1; Liver specific transcription factor LFB1; Liver-specific transcription factor LF-B1; Maturity onset diabetes of the young 3; MODY 3; MODY3; TCF 1; TCF-1; TCF1; Transcription factor 1; Transcription factor 1 hepatic
Form/Format	Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 10 mg/ml.
Purity/Purification	The purity is >90%,tested by HPLC and MS.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	HNF1A peptide (MBS9626542) is used for blocking the activity of HNF1A antibody (MBS9607829)
Molecular Weight	67,356 Da
OMIM	142330
Supply Chain Verification	Manufactured in a lab with traceable raw materials manufactured on site. Coordinated product portfolio of antibodies, pairs, conjugates, recombinant proteins, and immunoassay materials available, please inquire.
Notes	For phospho antibody, we provide phospho peptide (0.5mg) and non-phospho peptide (0.5mg)
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for HNF1A blocking peptide	Blocking/Control
Related Product Information for HNF1A blocking peptide	Blocking peptides are peptides that bind specifically to the target antibody and block antibody binding. These peptide usually contains the epitope recognized by the antibody. Antibodies bound to the blocking peptide no longer bind to the epitope on the target protein. This mechanism is useful when non-specific binding is an issue, for example, in Western blotting (immunoblot) and immunohistochemistry (IHC). By comparing the staining from the blocked antibody versus the antibody alone, one can see which staining is specific; Specific binding will be absent from the western blot or immunostaining performed with the neutralized antibody.
Other Notes	Small volumes of HNF1A blocking peptide 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 HNF1A purchase	MBS9626542 is a blocking peptide targeting HNF1A.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for HNF1A. It may not necessarily be applicable to this product.

NCBI GI #	256542297
NCBI GeneID	6927
NCBI Accession #	NP_000536.5

UniProt Primary Accession #	P20823
UniProt Secondary Accession #	Q2M3H2; Q99861; A5Z2R8; E0YMJ5; E0YMK0; E0YMK1; E2I9R4; E2I9R5; F5H5U3
UniProt Related Accession #	P20823
GenBank Nucleotide #	NM_000545.6
NCBI Official Full Name	hepatocyte nuclear factor 1-alpha
NCBI Official Synonym Full Names	HNF1 homeobox A
NCBI Official Symbol	HNF1A
NCBI Official Synonym Symbols	HNF1; LFB1; TCF1; MODY3; TCF-1; HNF-1A; IDDM20
UniProt Protein Name	Hepatocyte nuclear factor 1-alpha
UniProt Synonym Protein Names	Liver-specific transcription factor LF-B1; LFB1; Transcription factor 1
Protein Family	Hepatocyte nuclear factor
UniProt Gene Name	HNF1A
UniProt Synonym Gene Names	TCF1; HNF-1-alpha; HNF-1A; LFB1; TCF-1
UniProt Entry Name	HNF1A_HUMAN
NCBI Protein Information	hepatocyte nuclear factor 1-alpha; HNF-1-alpha; albumin proximal factor; hepatic nuclear factor 1; transcription factor 1, hepatic; interferon production regulator factor; liver-specific transcription factor LF-B1
NCBI Summary for HNF1A	The protein encoded by this gene is a transcription factor required for the expression of several liver-specific genes. The encoded protein functions as a homodimer and binds to the inverted palindrome 5'-GTTAATNATTAAC-3'. Defects in this gene are a cause of maturity onset diabetes of the young type 3 (MODY3) and also can result in the appearance of hepatic adenomas. [provided by RefSeq, Mar 2009]

UniProt Comments for HNF1A	HNF1A: Transcriptional activator that regulates the tissue specific expression of multiple genes, especially in pancreatic islet cells and in liver. Required for the expression of several liver specific genes. Binds to the inverted palindrome 5'- GTTAATNATTAAC-3'. Defects in HNF1A are a cause of hepatic adenomas familial (HEPAF). Hepatic adenomas are rare benign liver tumors of presumable epithelial origin that develop in an otherwise normal liver. Hepatic adenomas may be single or multiple. They consist of sheets of well-differentiated hepatocytes that contain fat and glycogen and can produce bile. Bile ducts or portal areas are absent. Kupffer cells, if present, are reduced in number and are non-functional. Conditions associated with adenomas are insulin-dependent diabetes mellitus and glycogen storage diseases (types 1 and 3). Bi-allelic inactivation of HNF1A, whether sporadic or associated with MODY3, may be an early step in the development of some hepatocellular carcinomas. Defects in HNF1A are the cause of maturity-onset diabetes of the young type 3 (MODY3); also symbolized MODY-3. MODY is a form of diabetes that is characterized by an autosomal dominant mode of inheritance, onset in childhood or early adulthood (usually before 25 years of age), a primary defect in insulin secretion and frequent insulin-independence at the beginning of the disease. Defects in HNF1A are the cause of susceptibility to diabetes mellitus insulin-dependent type 20 (IDDM20). IDDM20 is a multifactorial disorder of glucose homeostasis that is characterized by susceptibility to ketoacidosis in the absence of insulin therapy. Clinical fetaures are polydipsia, polyphagia and polyuria which result from hyperglycemia-induced osmotic diuresis and secondary thirst. These features can result in long-term complications that affect the eyes, kidneys, nerves, and blood vessels. Belongs to the HNF1 homeobox family. 3 isoforms of the human protein are produced by alternative splicing. Protein type: DNA-binding; Transcription factor Chromosomal Location of Human Ortholog: 12q24.2 Cellular Component: nucleoplasm; protein complex; cytoplasm; nucleus Molecular Function: protein dimerization activity; protein binding; protein homodimerization activity; DNA binding; protein heterodimerization activity; transcription factor activity Biological Process: regulation of transcription from RNA polymerase II promoter; transcription, DNA-dependent; insulin secretion; glucose import; positive regulation of transcription, DNA-dependent; positive regulation of transcription from RNA polymerase II promoter; glucose homeostasis Disease: Diabetes Mellitus, Insulin-dependent, 20; Diabetes Mellitus, Insulin-dependent; Hepatic Adenomas, Familial; Maturity-onset Diabetes Of The Young, Type 3; Renal Cell Carcinoma, Nonpapillary; Diabetes Mellitus, Noninsulin-dependent
Research Articles on HNF1A	**1.** report of 2 sisters with childhood onset diabetes who are both heterozygous for the most common mutation in each of 2 transcription factors, HNF1A, and HNF4A; study of genotypes and phenotypes within the family to investigate the digenic inheritance
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