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Rabbit Anti-phospho-HNF4 (Ser304)/AP Conjugated antibody

SL8451R-AP

Product Name	Anti-phospho-HNF4 (Ser304)/AP
Chinese Name	碱性磷酸酶（AP）标记的磷酸化肝 The nucleus 因子 4α 抗体
Alias	HNF4(Phospho-Ser304); Hepatic nuclear factor 4 alpha; Hepatocyte nuclear factor 4 alpha; Hepatocyte nuclear factor 4; HNF 4 alpha; HNF 4; HNF4; HNF4A; HNF4a7; HNF4a8; HNF4a9; Hnf4alpha; MODY 1; MODY; MODY1; NR2A1; NR2A21; Nuclear receptor subfamily 2 group A member 1; TCF 14; TCF; TCF14; Tcf4; Transcription factor 14, hepatic nuclear factor; Transcription factor 14; Transcription factor HNF 4; Transcription factor HNF4; HNF4A_HUMAN.
Product Type	Phosphorylated anti
Research Area	Tumour Cell biology immunology Chromatin and nuclear signals Signal transduction transcriptional regulatory factor Kinases and Phosphatases
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human,Mouse(predicted:Rat,Chicken,Pig,Cow,Horse,Rabbit,Zebrafish,GuineaPig)
Applications	WB=1:50-200 IHC-P=1:50-200 IHC-F=1:50-200 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight	52kDa
Form	Lyophilized or Liquid
Concentration	1mg/ml
immunogen	KLH conjugated Synthesised phosphopeptide derived from human HNF4 alpha around the phosphorylation site of Ser304
Lsotype	IgG
Purification	affinity purified by Protein A
Storage Buffer	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a

year when kept at -20°C. When reconstituted in sterile pH 7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Product Detail

background:
The protein encoded by the HNF4 gene is a nuclear transcription factor which binds DNA as a homodimer. The encoded protein controls the expression of several genes, including hepatocyte nuclear factor 1 alpha, a transcription factor which regulates the expression of several hepatic genes. This gene may play a role in development of the liver, kidney, and intestines. Mutations in this gene have been associated with monogenic autosomal dominant non insulin dependent diabetes mellitus type I. At least three different transcript variants encoding three different isoforms have been found for this gene.

Function:
Transcriptionally controlled transcription factor. Binds to DNA sites required for the transcription of alpha 1-antitrypsin, apolipoprotein CIII, transthyretin genes and HNF1-alpha. May be essential for development of the liver, kidney and intestine.

Subunit:
Homodimerization is required for HNF4-alpha to bind to its recognition site.

Subcellular Location:
Nucleus.

Post-translational modifications:
Phosphorylated on tyrosine residue(s); phosphorylation is important for its DNA-binding activity. Phosphorylation may directly or indirectly play a regulatory role in the subnuclear distribution. Phosphorylation at Ser-313 by AMPK reduces the ability to form homodimers and bind DNA.
Acetylation at Lys-458 lowers transcriptional activation by about two-fold.

DISEASE:
Defects in HNF4A are the cause of maturity-onset diabetes of the young type 1 (MODY1) [MIM:125850]; also symbolized MODY-1. 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.

Similarity:
Belongs to the nuclear hormone receptor family. NR2 subfamily.
Contains 1 nuclear receptor DNA-binding domain.

Database links:

Entrez Gene: 3172 Human

Entrez Gene: 15378 Mouse

Entrez Gene: 25735 Rat

Omim: 600281 Human

SwissProt: P41235 Human

SwissProt: P49698 Mouse

SwissProt: P22449 Rat

Unigene: 116462 Human

Unigene: 202383 Mouse

Unigene: 12238 Rat

Important Note:
This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.