Recombinant Human NR5A2, His-tagged

Cat. No. NR5A2-2505H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human His tagged LRH-1 was expressed in a*Baculovirus*system and purified by affinity and FPLC chromatography. 60 kDa.
Species	Human
Source	Insect Cells
Description	LRH-1 or HB1F for human B1-binding factor belongs to the fushi tarazu factor-1 (FTZ-F1) subfamily of orphan nuclear receptors and is closely related to steroidogenic factor-1. LRH1 contains a DNA-binding domain with 2 zinc finger motifs, an FTZ-F1 box, and a ligand-binding domain. Cholesterol 7-alpha-hydroxylase is the first and rate-limiting enzyme in a pathway through which cholesterol is metabolized to bile acids. Elevated promoter-specific repressor protein (SHP) inactivates LRH1 by forming a heterodimeric complex that leads to promoter-specific repression of both CYP7A1 and SHP. These results revealed an elaborate autoregulatory cascade mediated by nuclear receptors for the maintenance of hepatic cholesterol catabolism. LRH1 specifically binds and activates viral hepatitis B enhancer II, an essential element for the liver-specific regulation of hepatitis B virus gene expression. CPF is a key regulator of human CYP7A gene expression in the liver. SHP1 represses expression of CYP7A1 by inhibiting the activity of LRH1 which regulates CYP7A1 expression positively. This bile acid-activated regulatory cascade provides a molecular basis for the coordinate suppression of CYP7A1 and other genes involved in bile acid biosynthesis.

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Applications	Recombinant LRH-1 can be used for protein-protein interaction assays.
Activity	1 unit equals 1 nanogram of purified protein. 100 units are sufficient for a protein-protein interaction assay.
Quality Control	The purified protein is greater than 95% homogeneous and contains no detectable proteases, DNase and RNase activity.
Reagents Supplied	1x dilution buffer A: 20 mM Tris-Cl (pH 7.9), 20% Glycerol, 100 mM KCl, 0.2 mM EDTA and 1 mM DTT.
Storage Conditions	Store at -80°C.
Pathways	Maturity onset diabetes of the young; Gene Expression; Regulation of beta-cell development

GENE INFORMATION

Gene Name	NR5A2 nuclear receptor subfamily 5, group A, member 2 [Homo sapiens]
Synonyms	NR5A2; nuclear receptor subfamily 5, group A, member 2; B1F; CPF; FTF; B1F2; LRH1; hB1F; LRH-1; FTZ-F1; hB1F-2; FTZ-F1beta; nuclear receptor NR5A2; liver receptor homolog-1; liver receptor homolog 1; CYP7A promoter-binding factor; fetoprotein-alpha 1 (AFP) transcription factor; b1-binding factor, hepatocyte transcription factor which activates enhancer II of hepatitis B virus
Gene ID	2494
mRNA Refseq	NM_003822
Protein Refseq	NP_003813

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MIM	604453
UniProt ID	O00482
Chromosome Location	1q32.11
Function	RNA polymerase II transcription factor activity, enhancer binding; lipid binding; metal ion binding; protein binding; steroid hormone receptor activity; transcription activator activity; zinc ion binding
PDB rendering based on 1yok.	

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