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**Manuscript Type:** REVIEW

## Role of hepatocyte nuclear factor 4-alpha in gastrointestinal and liver diseases

Yeh M *et al.* HNF4 $\alpha$  in gastroinstinal and liver diseases

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### Abstract

Hepatocyte nuclear factor 4-alpha (HNF4 $\alpha$ ) is a highly conserved member of nuclear receptor superfamily of ligand-dependent transcription factors that is expressed in liver and gastrointestinal organs (pancreas, stomach, and intestine). In liver, HNF4 $\alpha$  is best known for its role as a master regulator of liver-specific gene expression and essential for adult and fetal liver function. Dysregulation of HNF4 $\alpha$  expression has been associated with many human diseases such as ulcerative colitis, colon cancer, maturity-onset

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## Role of Hepatocyte Nuclear Factor 4-Alpha (HNF4a) in Gastrointestinal and Liver D



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Hepatocyte nuclear factor 4-alpha (HNF4- $\alpha$ ) is a nuclear receptor regulating metabolism, cell junctions, differentiation and proliferation in liver and intestinal epithelial cells. Mutations within the HNF4A gene are associated with human diseases such as maturity-onset diabetes of the young.

### Hepatocyte nuclear factor 4-alpha involvement in liver and ...

[www.ncbi.nlm.nih.gov/pmc/articles/PMC3886012/](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3886012/)

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### Hepatocyte nuclear factor 4-alpha involvement in liver and ...

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Jan 07, 2014 · Abstract. Hepatocyte nuclear factor 4-alpha (HNF4- $\alpha$ ) is a nuclear receptor regulating metabolism, cell junctions, differentiation and proliferation in liver and intestinal epithelial cells. Mutations within the HNF4A gene are associated with human diseases such as maturity-onset diabetes of ...

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Publish Year: 2014

### The role of hepatocyte nuclear factor 4-alpha in ...

<https://www.sciencedirect.com/science/article/pii/S0041008X16301016>

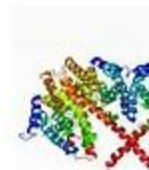
Hepatocyte nuclear factor 4-alpha (HNF4 $\alpha$ ) is considered the master regulator of hepatic differentiation ( Bonzo et al., 2012, Hwang-Verslues and Sladek, 2010, Parviz et al., 2003 ). It regulates various hepatocyte specific processes including liver development, transcriptional regulation of ...

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## Hepatocyte nuclear factor 4 alpha - Wikipedia

[https://en.wikipedia.org/wiki/Hepatocyte\\_nuclear\\_factor\\_4\\_alpha](https://en.wikipedia.org/wiki/Hepatocyte_nuclear_factor_4_alpha) ▾

**Function.** HNF-4 $\alpha$  is a **nuclear** transcription factor that 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 plays a **role** in development of the **liver**, kidney, and intestines. ...

**Aliases:** HNF4A, HNF4, HNF4a7, HNF4a8, ... **Chr.:** Chromosome 20 (human)

**End:** 44,434,596 bp

**PDB:** Ortholog search: PDBe RCSB

## Hepatocyte nuclear factor-4 alpha regulates liver ...

<https://onlinelibrary.wiley.com/doi/full/10.1002/hep.24066>

Nov 04, 2010 · **Hepatocyte nuclear factor-4 alpha** (HNF-4 $\alpha$ ) was initially identified as a transcriptional **factor** required for **liver**-specific gene expression. 1 Coenzyme A (CoA) derivatives of certain fatty acids can bind to the ligand-binding domain of HNF-4 $\alpha$  and activate the receptor, 2 suggesting that HNF-4 $\alpha$  activity is subjected to modulation by metabolic and nutritional signals.

**Cited by:** 24

**Author:** Min Guan, Linbing Qu, Wenjuan Tan, Lin...

**Publish Year:** 2011

## Hepatocyte nuclear factor 4-alpha involvement in liver and ...

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3886012>

Jan 07, 2014 · Core tip: **Hepatocyte nuclear factor 4-alpha** (HNF4- $\alpha$ ) is an important regulator of **liver** and intestinal epithelial cells **function**. Over the last years, HNF4- $\alpha$  has been associated with inflammatory bowel **diseases** following results obtained from knockout mice and human genome-wide association studies.

**Cited by:** 63

**Author:** Jean-Philippe Babeu, François Boudreau

**Publish Year:** 2014

## Hepatocyte nuclear factor 4-alpha involvement in liver and ...

<https://www.ncbi.nlm.nih.gov/pubmed/24415854>

Jan 07, 2014 · **Hepatocyte nuclear factor 4-alpha** (HNF4- $\alpha$ ) is a **nuclear** receptor regulating metabolism, cell junctions, differentiation and proliferation in **liver** and intestinal epithelial cells. Mutations within the HNF4A gene are associated with human **diseases** ...

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**Publish Year:** 2014

## The role of hepatocyte nuclear factor 4-alpha in ...

<https://www.sciencedirect.com/science/article/pii/S0041008X16301016>

## Hepatocyte nuclear factor 4 alpha

Hepatocyte nuclear factor 4 alpha (HNF4A) also known as NR2A1 (nuclear receptor subfamily 2, group A, member 1) is a nuclear receptor that in humans is encoded by the HNF4A gene. HNF-4 $\alpha$  is a nuclear transcription factor that binds DNA as a homodimer.



Data from: Wikipedia

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