



## HNF-1 (H-205): sc-8986

### BACKGROUND

HNF-1 ( $\alpha$  and  $\beta$ ), HNF-3 ( $\alpha$ ,  $\beta$  and  $\gamma$ ), HNF-4 ( $\alpha$  and  $\gamma$ ), and HNF-6 compose, in part, a homeoprotein family designated the Hepatocyte Nuclear Factor family (1-4). The various HNF-1 isoforms regulate transcription of genes in the liver as well as in other tissues such as kidney, small intestine and thymus (1). HNF-3 $\alpha$ , HNF-3 $\beta$  and HNF-3 $\gamma$  regulate the transcription of numerous hepatocyte genes in adult liver. HNF-3 $\alpha$  and HNF-3 $\beta$  have also been shown to be involved in gastrulation events such as body axis formation (2,4). HNF-4 $\alpha$  and HNF-4 $\gamma$  have been shown to be important for early embryo development. HNF-4 $\alpha$  is expressed in liver, kidney, pancreas, small intestine, testis and colon; and HNF-4 $\gamma$  is expressed in each of these tissues except liver (3). HNF-6 has been shown to bind to the promoter of HNF-3 $\beta$ , which indicates a potential role of HNF-6 in gut endoderm epithelial cell differentiation. Evidence suggests that HNF-6 may also be a transcriptional activator for at least 22 other hepatocyte-enriched genes, including cytochrome P450 2C13 and  $\alpha$ -1 antitrypsin (4).

### SOURCE

HNF-1 (H-205) is a rabbit polyclonal antibody raised against a recombinant protein corresponding to amino acids 80-284 mapping within an internal region of HNF-1 $\alpha$  of human origin.

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS containing 0.1% sodium azide and 0.2% gelatin.

Also available as HNF-1 (H-205) X TransCruz antibody: sc-8986 X for gel supershift studies; supplied as 200  $\mu$ g IgG in 0.1 ml PBS containing 0.1% sodium azide.

### STORAGE

Store at 4° C, do not freeze; stable for one year from the date of shipment.

### SPECIFICITY

HNF-1 (H-205) reacts with HNF-1 $\alpha$  and HNF-1 $\beta$  of mouse, rat and human origin by Western blotting, immunoprecipitation and immunohistochemistry (including paraffin-embedded sections).

HNF-1 (H-205) X TransCruz antibody is recommended for gel supershift studies.

Recommended dilution range for Western blot analysis: 1:200–1:1000. Recommended starting dilution: 1:200.

Molecular weight of HNF-1: 75 kDa, 67 kDa.

Western blotting positive control: Hep G2 WCL, sc-2227; mouse liver extract, sc-2256; rat liver extract, sc-2395.

### RESEARCH USE

For research use only, not for use in diagnostic procedures.

### REFERENCES

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2. Kaestner, K.H., Hiemisch, H., Luckow, B., and Schutz, G. 1994. The HNF-3 gene family of transcription factors in mice: gene structure, cDNA sequence, and mRNA distribution. *Genomics* **20**: 377-385.
3. Drewes, T., Senkel, S., Holewa, B., and Ryffel, G.U. 1996. Human hepatocyte nuclear factor 4 isoforms are encoded by distinct and differentially expressed genes. *Mol. Cell Biol.* **16**: 925-931.
4. Samadani, U. and Costa, R.H. 1996. The transcriptional activator hepatocyte nuclear factor 6 regulates liver gene expression. *Mol. Cell Biol.* **16**: 6273-6284.