

HNF-3 γ (h): 293T Lysate: sc-111854

BACKGROUND

HNF-1 (α and β), HNF-3 (α , β and γ), HNF-4 (α and γ) and HNF-6 compose, in part, a homeoprotein family designated the hepatocyte nuclear factor family. 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. HNF-3 α , HNF-3 β and HNF-3 γ regulate the transcription of numerous hepatocyte genes in adult liver. HNF-3 α and HNF-3 β have also been shown to be involved in gastrulation events such as body axis formation. HNF-4 α and HNF-4 γ have been shown to be important for early embryo development. HNF-4 α is expressed in liver, kidney, pancreas, small intestine, testis and colon; HNF-4 γ is expressed in each of these tissues except liver. HNF-6 has been shown to bind to the promoter of HNF-3 β , 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 α -1 antitrypsin.

REFERENCES

1. Bach, I., et al. 1993. More potent transcriptional activators or a trans-dominant inhibitor of the HNF-1 homeoprotein family are generated by alternative RNA processing. *EMBO J.* 12: 4229-4242.
2. Kaestner, K.H., et al. 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., et al. 1996. Human hepatocyte nuclear factor 4 isoforms are encoded by distinct and differentially expressed genes. *Mol. Cell. Biol.* 16: 925-931.
4. Samadani, U., et al. 1996. The transcriptional activator hepatocyte nuclear factor 6 regulates liver gene expression. *Mol. Cell. Biol.* 16: 6273-6284.
5. Nakamura, T., et al. 1998. Adenovirus-transferred HNF-3 γ conserves some liver functions in primary cultured hepatocytes of adult rats. *Biochem. Biophys. Res. Commun.* 253: 352-357.
6. Nakamura, T., et al. 1999. Hepatoprotective action of adenovirus-transferred HNF-3 γ gene in acute liver injury caused by CCl₄. *FEBS Lett.* 459: 1-4.
7. Liu, Y., et al. 2002. FOXA3 (HNF-3 γ) binds to and activates the rat proglucagon gene promoter but is not essential for proglucagon gene expression. *Biochem. J.* 366: 633-641.
8. Eleswarapu, S., et al. 2005. Growth hormone regulates the expression of hepatocyte nuclear factor-3 γ and other liver-enriched transcription factors in the bovine liver. *J. Endocrinol.* 184: 95-105.
9. Wiwi, C.A., et al. 2005. Role of hepatocyte nuclear factors in transcriptional regulation of male-specific CYP2A2. *J. Biol. Chem.* 280: 3259-3268.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CHROMOSOMAL LOCATION

Genetic locus: FOXA3 (human) mapping to 19q13.32.

PRODUCT

HNF-3 γ (h): 293T Lysate represents a lysate of human HNF-3 γ transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

HNF-3 γ (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive HNF-3 γ antibodies. Recommended use: 10-20 μ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

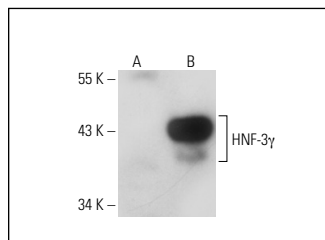
HNF-3 γ (G-2): sc-271229 is recommended as a positive control antibody for Western Blot analysis of enhanced human HNF-3 γ expression in HNF-3 γ transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

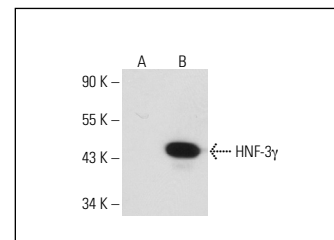
To ensure optimal results, the following support reagents are recommended:

1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



HNF-3 γ (G-2): sc-271229. Western blot analysis of HNF-3 γ expression in non-transfected: sc-117752 (A) and human HNF-3 γ transfected: sc-111854 (B) 293T whole cell lysates.



HNF-3 γ (A-2): sc-74424. Western blot analysis of HNF-3 γ expression in non-transfected: sc-117752 (A) and human HNF-3 γ transfected: sc-111854 (B) 293T whole cell lysates.

RESEARCH USE

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