SANTA CRUZ BIOTECHNOLOGY, INC.

HNF-3β (h): 293T Lysate: sc-176240

BACKGROUND

HNF-1 (α and β), HNF-3 (α, β and γ), HNF-4 (α and γ), and HNF-6 compose, in part, a homoeprotein 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-3α, HNF-3β and HNF-3γ regulate the transcription of numerous hepatocyte genes in adult liver. HNF-3α and HNF-3β have also been shown to be involved in gastrulation events such as body axis formation. HNF-4α and HNF-4γ have been shown to be important for early embryo development. HNF-4α is expres-sed in liver, kidney, pancreas, small intestine, testis and colon; HNF-4γ is expressed in each of these tissues except liver. HNF-6 has been shown to bind to the promoter of HNF-3β, which indicates a potential role of HNF-6 in gut endoderm epithelial cell differentiation. Evidence suggests that HNF-6 may also be a transriptional 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 transdominant inhibitor of the HNF1 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. Hatzis, P., et al. 2006. Mitogen-activated protein kinase-mediated disruption of enhancer-promoter communication inhibits hepatocyte nuclear factor 4α expression. Mol. Cell. Biol. 26: 7017-7029.
6. Jones, R.G., et al. 2006. Conditional deletion of β1 integrins in the intestinal epithelium causes a loss of Hedgehog expression, intestinal hyperplasia, and early postnatal lethality. J. Cell Biol. 175: 505-514.
7. McGee-Estrada, K., et al. 2007. Comparison of LTR enhancer elements in sheep betaretroviruses: insights into the basis for tissue-specific expression. Virus Genes 35: 303-312.
8. Chen, Y., et al. 2007. *In vitro* differentiation of mouse bone marrow stromal stem cells into hepatocytes induced by conditioned culture medium of hepatocytes. J. Cell. Biochem. 102: 52-63.
9. Snykers, S., et al. 2007. Chromatin remodelling agent trichostatin A: a key-factor in the hepatic differentiation of human mesenchymal stem cells derived of adult bone marrow. BMC Dev. Biol. 7: 24.

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.

CHROMOSOMAL LOCATION

Genetic locus: FOXA2 (human) mapping to 20p11.21.

PRODUCT

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

APPLICATIONS

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

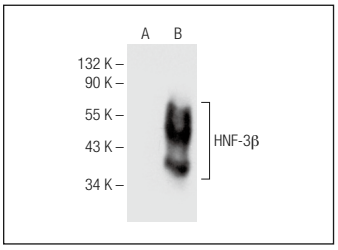
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

HNF-3β (H-4): sc-374376 is recommended as a positive control antibody for Western Blot analysis of enhanced human HNF-3β expression in HNF-3β transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

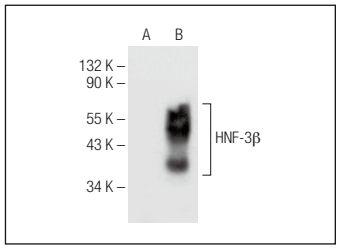
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-3β (H-4): sc-374376. Western blot analysis of HNF-3β expression in non-transfected: sc-117752 (**A**) and human HNF-3β transfected: sc-176240 (**B**) 293T whole cell lysates.



HNF-3β (A-12): sc-374375. Western blot analysis of HNF-3β expression in non-transfected: sc-117752 (**A**) and human HNF-3β transfected: sc-176240 (**B**) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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