

HNF-3 γ (D-4): sc-166703

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; and 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 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.

CHROMOSOMAL LOCATION

Genetic locus: FOXA3 (human) mapping to 19q13.32; Foxa3 (mouse) mapping to 7 A3.

SOURCE

HNF-3 γ (D-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1-40 at the N-terminus of HNF-3 γ of human origin.

PRODUCT

Each vial contains 200 μ g IgG γ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-166703 X, 200 μ g/0.1 ml.

Blocking peptide available for competition studies, sc-166703 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

HNF-3 γ (D-4) is recommended for detection of HNF-3 γ of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

HNF-3 γ (D-4) is also recommended for detection of HNF-3 γ in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for HNF-3 γ siRNA (h): sc-35571, HNF-3 γ siRNA (m): sc-35572, HNF-3 γ shRNA Plasmid (h): sc-35571-SH, HNF-3 γ shRNA Plasmid (m): sc-35572-SH, HNF-3 γ shRNA (h) Lentiviral Particles: sc-35571-V and HNF-3 γ shRNA (m) Lentiviral Particles: sc-35572-V.

HNF-3 γ (D-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

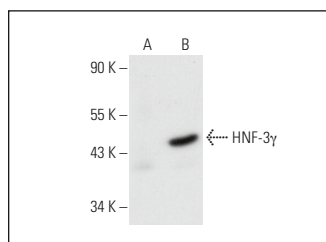
Molecular Weight of HNF-3 γ : 45 kDa.

Positive Controls: HNF-3 γ (h): 293 Lysate: sc-111854, Hep G2 cell lysate: sc-2227 or mouse embryo extract: sc-364239.

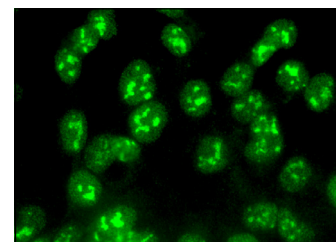
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



HNF-3 γ (D-4): sc-166703. Western blot analysis of HNF-3 γ expression in non-transfected: sc-110760 (A) and human HNF-3 γ transfected: sc-111854 (B) 293 whole cell lysates.



HNF-3 γ (D-4): sc-166703. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nucleolar and nuclear localization.

SELECT PRODUCT CITATIONS

1. Tomaz, R.A., et al. 2022. Generation of functional hepatocytes by forward programming with nuclear receptors. *Elife* 11: e71591.

RESEARCH USE

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