SANTA CRUZ BIOTECHNOLOGY, INC.

HNF-4α (S-20): sc-6557

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 expressed in liver, kidney, pancreas, small intestine, testis and colon; and 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.

CHROMOSOMAL LOCATION

Genetic locus: HNF4A (human) mapping to 20q13.12; Hnf4a (mouse) mapping to 2 H3.

SOURCE

HNF-4α (S-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of HNF-4α of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6557 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-6557 X, 200 µg/0.1 ml.

APPLICATIONS

HNF-4α (S-20) is recommended for detection of HNF-4α of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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-4α (S-20) is also recommended for detection of HNF-4α in additional species, including equine, canine, bovine and porcine. Suitable for use as control antibody for HNF-4α siRNA (h): sc-35573, HNF-4α siRNA (m): sc-35574, HNF-4α shRNA Plasmid (h): sc-35573-SH, HNF-4α shRNA Plasmid (m): sc-35574-SH, HNF-4α shRNA (h) Lentiviral Particles: sc-35573-V and HNF-4α shRNA (m) Lentiviral Particles: sc-35574-V.

HNF-4α (S-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

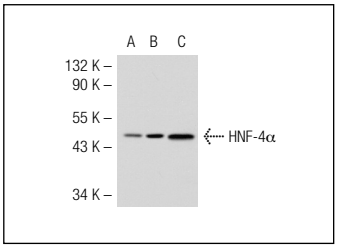
Molecular Weight of full-length HNF-4α: 54 kDa.

Molecular Weight of N-terminal truncated HNF-4α: 40 kDa.

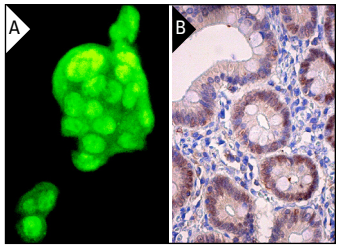
STORAGE

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

DATA



HNF-4α (S-20): sc-6557. Western blot analysis of HNF-4α expression in non-transfected 293T: sc-117752 (**A**), mouse HNF-4α transfected 293T: sc-126960 (**B**) and Hep G2 (**C**) whole cell lysates.



HNF-4α (S-20): sc-6557. Immunofluorescence staining of methanol-fixed Hep G2 cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing nuclear staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

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3. Iwahori, T. 2003. CYP3A4 inducible model for *in vitro* analysis of human drug metabolism using a bioartificial liver. Hepatology 37: 665-673.
4. Stepanian, S.V., et al. 2003. Characterization of the human glycerol kinase promoter: identification of a functional HNF-4α binding site and evidence for transcriptional activation. Mol. Genet. Metab. 80: 412-418.
5. Pitarque, M., et al. 2005. Transcriptional regulation of the human CYP2A6 gene. J. Pharmacol. Exp. Ther. 313: 814-822.
6. Takagi, S., et al. 2008. Post-transcriptional regulation of human pregnane X receptor by micro-RNA affects the expression of cytochrome P450 3A4. J. Biol. Chem. 283: 9674-9680.
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9. Yao, H.S., et al. 2015. Hepatocyte nuclear factor 4α suppresses the aggravation of colon carcinoma. Mol. Carcinog. E-published.

RESEARCH USE

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