

HNF-1 α (H-140): sc-10791

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 liver and 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.

CHROMOSOMAL LOCATION

Genetic locus: HNF1A (human) mapping to 12q24.31; Hnf1a (mouse) mapping to 5 F.

SOURCE

HNF-1 α (H-140) is a rabbit polyclonal antibody raised against amino acids 492-631 of HNF-1 α of human origin.

PRODUCT

Each vial contains 200 μ g IgG 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-10791 X, 200 μ g/0.1 ml.

APPLICATIONS

HNF-1 α (H-140) is recommended for detection of HNF-1 α of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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-1 α (H-140) is also recommended for detection of HNF-1 α in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for HNF-1 α siRNA (h): sc-35567, HNF-1 α siRNA (m): sc-35568, HNF-1 α shRNA Plasmid (h): sc-35567-SH, HNF-1 α shRNA Plasmid (m): sc-35568-SH, HNF-1 α shRNA (h) Lentiviral Particles: sc-35567-V and HNF-1 α shRNA (m) Lentiviral Particles: sc-35568-V.

HNF-1 α (H-140) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of HNF-1 α : 79 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, Caco-2 cell lysate: sc-2262 or mouse liver extract: sc-2256.

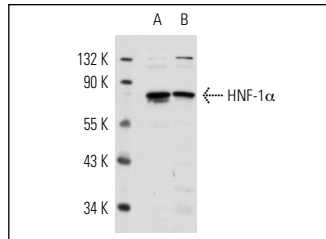
STORAGE

Store at 4 $^{\circ}$ C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

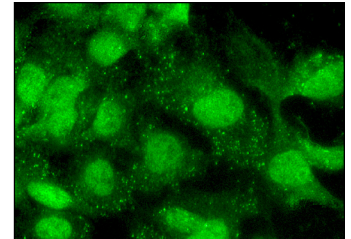
RESEARCH USE

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

DATA



HNF-1 α (H-140): sc-10791. Western blot analysis of HNF-1 α expression in Hep G2 (A) and Caco-2 (B) whole cell lysates.



HNF-1 α (H-140): sc-10791. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

- Soutoglou, E., et al. 2002. Coordination of PIC assembly and chromatin remodeling during differentiation-induced gene activation. *Science* 295: 1901-1904.
- Hatzis, P., et al. 2002. Dynamics of enhancer-promoter communication during differentiation-induced gene activation. *Mol. Cell* 10: 1467-1477.
- Triggs-Raine, B.L., et al. 2002. HNF-1 α G319S, a transactivation-deficient mutant, is associated with altered dynamics of diabetes onset in an Oji-Cree community. *Proc. Natl. Acad. Sci. USA* 99: 4614-4619.
- Cheng, Q., et al. 2008. Drug-metabolizing enzyme and transporter expression in a mouse model of diabetes and obesity. *Mol. Pharm.* 5: 77-91.
- Xu, J., et al. 2008. Expression of hepatocyte nuclear factor-1 α mRNA in human anaplastic thyroid cancer cell lines and tumors. *Thyroid* 18: 533-539.
- Tsukada, S., et al. 2009. Transcription factor AP-2 β inhibits glucose-induced Insulin secretion in cultured Insulin-secreting cell-line. *Diabetes Res. Clin. Pract.* 85: 279-285.
- Martin, L., et al. 2011. A mouse model of β -thalassemia shows a liver-specific down-regulation of Abcc6 expression. *Am. J. Pathol.* 178: 774-783.


 MONOS
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Try **HNF-1 α (F-7): sc-393925** or **HNF-1 α (B-3): sc-393668**, our highly recommended monoclonal alternatives to HNF-1 α (H-140). Also, for AC, HRP, FITC, PE, Alexa Fluor $^{\circledR}$ 488 and Alexa Fluor $^{\circledR}$ 647 conjugates, see **HNF-1 α (F-7): sc-393925**.