

HNF-1 α (C-19): sc-6547

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 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus 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-6547 X, 200 μ g/0.1 ml.

Blocking peptide available for competition studies, sc-6547 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

HNF-1 α (C-19) 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 (C-19) 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 (C-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

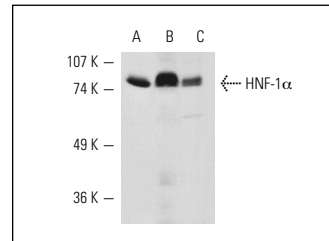
Molecular Weight of HNF-1 α : 79 kDa.

Positive Controls: mouse liver extract: sc-2256, Hep G2 cell lysate: sc-2227 or rat liver extract: sc-2395.

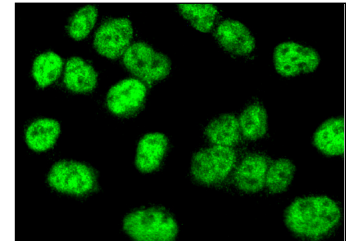
STORAGE

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

DATA



HNF-1 α (C-19): sc-6547. Western blot analysis of HNF-1 α expression in Hep G2 whole cell lysate (A) and rat liver (B) and mouse liver (C) liver extracts.



HNF-1 α (C-19): sc-6547. Immunofluorescence staining of formalin-fixed HepG2 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

- Soutoglou, E., et al. 2000. Transcriptional activation by hepatocyte nuclear factor-1 requires synergism between multiple coactivator proteins. *J. Biol. Chem.* 275: 12515-12520.
- Pramfalk, C., et al. 2010. HNF1 α and SREBP2 are important regulators of NPC1L1 in human liver. *J. Lipid Res.* 51: 1354-1362.
- Jeannot, E., et al. 2010. Spectrum of HNF1A somatic mutations in hepatocellular adenoma differs from that in patients with MODY3 and suggests genotoxic damage. *Diabetes* 59: 1836-1844.
- Huang, J., et al. 2010. Boosting native promoter activities with non-adjacent response-element multimers. *J. Biotechnol.* 150: 259-267.
- Abe, M., et al. 2011. Mechanisms of confluence-dependent expression of CD26 in colon cancer cell lines. *BMC Cancer* 11: 51.
- Galán, M., et al. 2011. Differential effects of HNF-1 α mutations associated with familial young-onset diabetes on target gene regulation. *Mol. Med.* 17: 256-265.
- Jonckheere, N., et al. 2012. GATA-4/-6 and HNF-1/-4 families of transcription factors control the transcriptional regulation of the murine Muc5ac mucin during stomach development and in epithelial cancer cells. *Biochim. Biophys. Acta* 1819: 869-876.
- Scharmach, E., et al. 2012. Perfluorooctanoic acid affects the activity of the hepatocyte nuclear factor 4 α (HNF4 α). *Toxicol. Lett.* 212: 106-112.

RESEARCH USE

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



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 (C-19). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **HNF-1 α (F-7): sc-393925**.