SANTA CRUZ BIOTECHNOLOGY, INC.

HNF-1β (C-20): sc-7411

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 liver and 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: HNF1B (human) mapping to 17q12; Hnf1b (mouse) mapping to 11 C.

SOURCE

HNF-1β (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of HNF-1β 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-7411 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-7411 X, 200 µg/0.1 ml.

APPLICATIONS

HNF-1β (C-20) is recommended for detection of HNF-1β of mouse, rat and human 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). HNF-1β (C-20) is also recommended for detection of HNF-1β in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for HNF-1β siRNA (h): sc-37928, HNF-1β siRNA (m): sc-37929, HNF-1β shRNA Plasmid (h): sc-37928-SH, HNF-1β shRNA Plasmid (m): sc-37929-SH, HNF-1β shRNA (h) Lentiviral Particles: sc-37928-V and HNF-1β shRNA (m) Lentiviral Particles: sc-37929-V.

HNF-1β (C-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

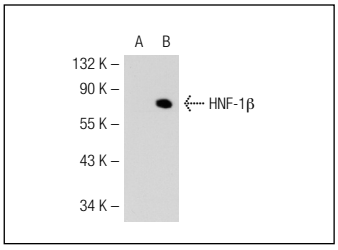
Molecular Weight of HNF-1β: 61 kDa.

Positive Controls: HNF-1β (h): 293T Lysate: sc-113415.

STORAGE

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

DATA



HNF-1β (C-20): sc-7411. Western blot analysis of HNF-1β expression in non-transfected: sc-117752 (**A**) and human HNF-1β transfected: sc-113415 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Streeper, R.S., et al. 2000. Differential role of hepatocyte nuclear factor-1 in the regulation of glucose-6-phosphatase catalytic subunit gene transcription by cAMP in liver- and kidney-derived cell lines. J. Biol. Chem. 275: 12108-12118.
2. Soutoglou, E., et al. 2000. Acetylation regulates transcription factor activity at multiple levels. Mol. Cell 5: 745-751.
3. Jiang, W., et al. 2011. CD24: a novel surface marker for PDX1-positive pancreatic progenitors derived from human embryonic stem cells. Stem Cells 29: 609-617.
4. Hunter, C.S., et al. 2011. Hnf1α (MODY3) regulates β-cell-enriched MafA transcription factor expression. Mol. Endocrinol. 25: 339-347.
5. Darwiche, H., et al. 2011. Inhibition of Notch signaling affects hepatic oval cell response in rat model of 2AAF-PH. Hepat. Med. 3: 89-98.
6. 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.
7. Nguyen, L.S., et al. 2013. Contribution of copy number variants involving nonsense-mediated mRNA decay pathway genes to neuro-developmental disorders. Hum. Mol. Genet. 22: 1816-1825.

RESEARCH USE

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