SANTA CRUZ BIOTECHNOLOGY, INC.

HNF-3β (H-4): sc-374376

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; 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: FOXA2 (human) mapping to 20p11.21; Foxa2 (mouse) mapping to 2 G3.

SOURCE

HNF-3β (H-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 431-459 at the C-terminus of HNF-3β of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 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-374376 X, 200 µg/0.1 ml.

HNF-3β (H-4) is available conjugated to agarose (sc-374376 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-374376 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374376 PE), fluorescein (sc-374376 FITC), Alexa Fluor® 488 (sc-374376 AF488), Alexa Fluor® 546 (sc-374376 AF546), Alexa Fluor® 594 (sc-374376 AF594) or Alexa Fluor® 647 (sc-374376 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374376 AF680) or Alexa Fluor® 790 (sc-374376 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374376 P, (100 µg 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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

HNF-3β (H-4) is recommended for detection of HNF-3β of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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-3β (H-4) is also recommended for detection of HNF-3β in additional species, including equine, canine, bovine and porcine.

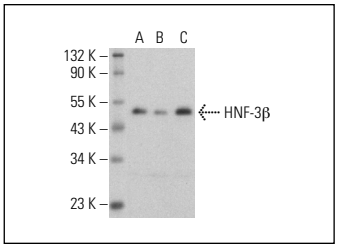
Suitable for use as control antibody for HNF-3β siRNA (h): sc-35569, HNF-3β siRNA (m): sc-35570, HNF-3β shRNA Plasmid (h): sc-35569-SH, HNF-3β shRNA Plasmid (m): sc-35570-SH, HNF-3β shRNA (h) Lentiviral Particles: sc-35569-V and HNF-3β shRNA (m) Lentiviral Particles: sc-35570-V.

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

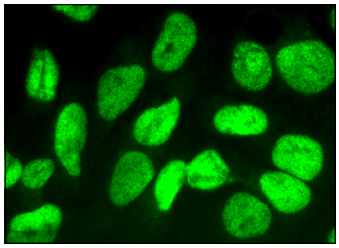
Molecular Weight of HNF-3β: 54 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, MDA-MB-231 cell lysate: sc-2232 or Hep G2 nuclear extract: sc-364819.

DATA



HNF-3β (H-4) HRP: sc-374376 HRP. Direct western blot analysis of HNF-3β expression in Hep G2 (**A**) and MDA-MB-231 (**B**) whole cell lysates and Hep G2 nuclear extract (**C**). Cruz Marker™ Molecular Weight Standards detected with Cruz Marker MW Tag-HRP: sc-516732.



HNF-3β (H-4): sc-374376. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Carter, D.A. 2017. Molecular phenotyping of transient postnatal tyrosine hydroxylase neurons in the rat bed nucleus of the stria terminalis. J. Chem. Neuroanat. 82: 29-38.
2. An, Y., et al. 2019. Derivation of pluripotent stem cells from nascent undifferentiated teratoma. Dev. Biol. 446: 43-55.
3. Malakhova, A.A., et al. 2020. Generation of induced pluripotent stem cell line ICGi018-A from peripheral blood mononuclear cells of a patient with Huntington's disease. Stem Cell Res. 44: 101743.
4. Liu, Q., et al. 2021. Histone demethylase PHF8 drives neuroendocrine prostate cancer progression by epigenetically upregulating FOXA2. J. Pathol. 253: 106-118.

RESEARCH USE

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