SANTA CRUZ BIOTECHNOLOGY, INC.

HNF-3β (M-20): sc-6554

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 α1 antitrypsin.

CHROMOSOMAL LOCATION

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

SOURCE

HNF-3β (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of HNF-3β of mouse origin.

PRODUCT

Each vial contains 100 µg 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-6554 X, 100 µg/0.1 ml.

Blocking peptide available for competition studies, sc-6554 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

HNF-3β (M-20) is recommended for detection of HNF-3β 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), 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-3β (M-20) is also recommended for detection of HNF-3β in additional species, including equine, canine, bovine, porcine and avian.

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.

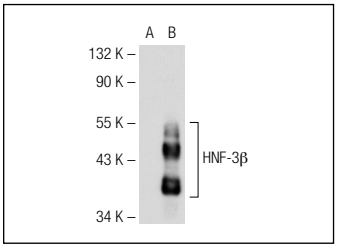
HNF-3β (M-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of HNF-3β: 54 kDa.

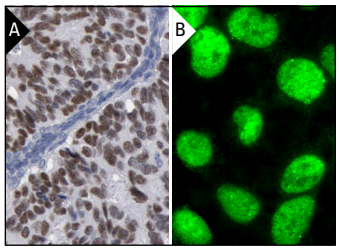
STORAGE

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

DATA



HNF-3β (M-20): sc-6554. Western blot analysis of HNF-3β expression in non-transfected: sc-117752 (**A**) and human HNF-3β transfected: sc-176240 (**B**) 293T whole cell lysates.



HNF-3β (M-20): sc-6554. Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast cancer showing nuclear staining of tumor cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**A**). Immunofluorescence staining of formalin-fixed HepG2 cells showing nuclear localization (**B**).

SELECT PRODUCT CITATIONS

1. Antes, T.J., et al. 2000. Identification and characterization of a 315-base pair enhancer, located more than 55 kilobases 5' of the apolipoprotein B gene, that confers expression in the intestine. J. Biol. Chem. 275: 26637-26648.
2. 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.
3. Fang, Q., et al. 2012. Functional analyses of the mutation nt-128 T→G in the hepatocyte nuclear factor-1α promoter region in Chinese diabetes pedigrees. Diabet. Med. 29: 1456-1464.
4. Wu, Y.L., et al. 2012. Human liver fatty acid binding protein (hFABP1) gene is regulated by liver-enriched transcription factors HNF3β and C/EBPα. Biochimie 94: 384-392.
5. Oleaga, C., et al. 2013. Cocoa flavanol metabolites activate HNF-3β, Sp1, and NFY-mediated transcription of apolipoprotein AI in human cells. Mol. Nutr. Food Res. 57: 986-995.
6. Chen, A.E., et al. 2013. Functional evaluation of ES cell-derived endodermal populations reveals differences between nodal and activin A-guided differentiation. Development 140: 675-686.

RESEARCH USE

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