SANTA CRUZ BIOTECHNOLOGY, INC.

HNF-3α/β (C-20): sc-6553

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 α-1 antitrypsin.

CHROMOSOMAL LOCATION

Genetic locus: FOXA1 (human) mapping to 14q21.1, FOXA2 (human) mapping to 20p11.21; Foxa1 (mouse) mapping to 12 C1, Foxa2 (mouse) mapping to 2 G3.

SOURCE

HNF-3α/β (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of HNF-3α of human 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-6553 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-6553 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

HNF-3α/β (C-20) is recommended for detection of HNF-3α and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

HNF-3α/β (C-20) is also recommended for detection of HNF-3α and HNF-3β in additional species, including bovine and porcine.

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

Molecular Weight of HNF-3α/β: 50 kDa.

Positive Controls: HNF-3β (h): 293T Lysate: sc-176240, DU 145 nuclear extract: sc-24960 or HeLa nuclear extract: sc-2120.

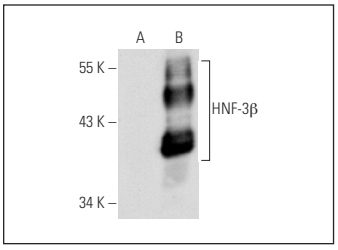
RESEARCH USE

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

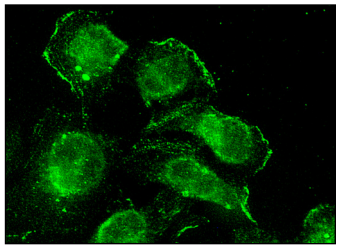
STORAGE

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

DATA



HNF-3α/β (C-20): sc-6553. 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-3α/β (C-20): sc-6553. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and membrane localization.

SELECT PRODUCT CITATIONS

1. Hatzis, P., et al. 2001. Regulatory mechanisms controlling human hepatocyte nuclear factor 4α gene expression. Mol. Cell. Biol. 21: 7320-7330.
2. Sun, Q., et al. 2009. Upstream stimulatory factor 2, a novel FoxA1-interacting protein, is involved in prostate-specific gene expression. Mol. Endocrinol. 23: 2038-2047.
3. Iacobazzi, V., et al. 2009. Role of FOXA in mitochondrial citrate carrier gene expression and Insulin secretion. Biochem. Biophys. Res. Commun. 385: 220-224.
4. Zhang, Y., et al. 2010. ErbB3 binding protein 1 represses metastasis-promoting gene anterior gradient protein 2 in prostate cancer. Cancer Res. 70: 240-248.
5. Nandana, S., et al. 2010. Hepsin cooperates with MYC in the progression of adenocarcinoma in a prostate cancer mouse model. Prostate 70: 591-600.
6. Gerhardt, J., et al. 2012. FOXA1 promotes tumor progression in prostate cancer and represents a novel hallmark of castration-resistant prostate cancer. Am. J. Pathol. 180: 848-861.
7. Moya, M., et al. 2012. Foxa1 reduces lipid accumulation in human hepatocytes and is down-regulated in nonalcoholic fatty liver. PLoS ONE 7: e30014.

PROTOCOLS

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