

HNF-3 β (A-12): sc-374375

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

SOURCE

HNF-3 β (A-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 431-459 at the C-terminus of HNF-3 β of mouse origin.

PRODUCT

Each vial contains 200 μ g 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-374375 X, 200 μ g/0.1 ml.

HNF-3 β (A-12) is available conjugated to agarose (sc-374375 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374375 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374375 PE), fluorescein (sc-374375 FITC), Alexa Fluor[®] 488 (sc-374375 AF488), Alexa Fluor[®] 546 (sc-374375 AF546), Alexa Fluor[®] 594 (sc-374375 AF594) or Alexa Fluor[®] 647 (sc-374375 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-374375 AF680) or Alexa Fluor[®] 790 (sc-374375 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374375 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

Store at 4 $^{\circ}$ 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-3 β (A-12) is recommended for detection of HNF-3 β of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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-3 β (A-12) is also recommended for detection of HNF-3 β in additional species, including equine, canine, bovine and porcine.

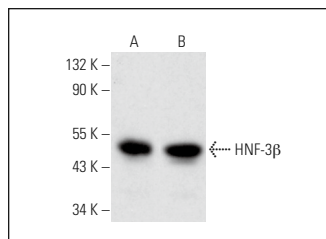
Suitable for use as control antibody for HNF-3 β siRNA (h): sc-35569, HNF-3 β siRNA (m): sc-35570, HNF-3 β shRNA Plasmid (h): sc-35569-SH, HNF-3 β shRNA Plasmid (m): sc-35570-SH, HNF-3 β shRNA (h) Lentiviral Particles: sc-35569-V and HNF-3 β shRNA (m) Lentiviral Particles: sc-35570-V.

HNF-3 β (A-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

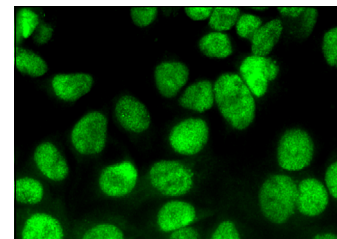
Molecular Weight of HNF-3 β : 54 kDa.

Positive Controls: MDA-MB-231 cell lysate: sc-2232, c4 whole cell lysate: sc-364186 or Hep G2 cell lysate: sc-2227.

DATA



HNF-3 β (A-12): sc-374375. Western blot analysis of HNF-3 β expression in MDA-MB-231 (A) and c4 (B) whole cell lysates.



HNF-3 β (A-12): sc-374375. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

- Lu, J., et al. 2018. Single-cell RNA sequencing reveals metallothionein heterogeneity during hESC differentiation to definitive endoderm. *Stem Cell Res.* 28: 48-55.
- Park, C.S., et al. 2020. Development of colonic organoids containing enteric nerves or blood vessels from human embryonic stem cells. *Cells* 9: 2209.
- Sahni, G., et al. 2021. A micropatterned human-specific neuroepithelial tissue for modeling gene and drug-induced neurodevelopmental defects. *Adv. Sci.* 8: 2001100.
- Seo, B.A., et al. 2021. TRIP12 ubiquitination of glucocerebrosidase contributes to neurodegeneration in Parkinson's disease. *Neuron* 109: 3758-3774.e11.

RESEARCH USE

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