

HNF-3 β (B-2): sc-271103

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 (B-2) is a mouse monoclonal antibody raised against amino acids 261-370 mapping within an internal region of HNF-3 β of human 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-271103 X, 200 μ g/0.1 ml.

STORAGE

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

APPLICATIONS

HNF-3 β (B-2) 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).

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 (B-2) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

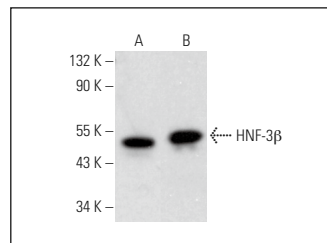
Molecular Weight of HNF-3 β : 54 kDa.

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

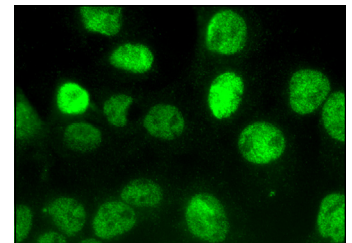
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



HNF-3 β (B-2): sc-271103. Western blot analysis of HNF-3 β expression in MDA-MB-231 (A) and c4 (B) whole cell lysates.



HNF-3 β (B-2): sc-271103. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

- Carpentier, A., et al. 2016. Hepatic differentiation of human pluripotent stem cells in miniaturized format suitable for high-throughput screen. *Stem Cell Res.* 16: 640-650.
- Asumda, F.Z., et al. 2018. Differentiation of hepatocyte-like cells from human pluripotent stem cells using small molecules. *Differentiation* 101: 16-24.
- Leitner, D., et al. 2019. Immature mDA neurons ameliorate motor deficits in a 6-OHDA Parkinson's disease mouse model and are functional after cryopreservation. *Stem Cell Res.* 41: 101617.
- Cheung, V.C., et al. 2021. Pluripotent stem cell-derived endometrial stromal fibroblasts in a cyclic, hormone-responsive, coculture model of human decidua. *Cell Rep.* 35: 109138.
- Ng, W.H., et al. 2022. Recapitulating human cardio-pulmonary co-development using simultaneous multilineage differentiation of pluripotent stem cells. *Elife* 11: e67872.

RESEARCH USE

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



See **HNF-3 β (H-4): sc-374376** for HNF-3 β antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.