SANTA CRUZ BIOTECHNOLOGY, INC.

HNF-3α (A-3): sc-514695

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.

REFERENCES

1. Bach, I. and Yaniv, M. 1993. More potent transcriptional activators or a transdominant inhibitor of the HNF-1 homeoprotein family are generated by alternative RNA processing. EMBO J. 12: 4229-4242.
2. Kaestner, K.H., et al. 1994. The HNF-3 gene family of transcription factors in mice: gene structure, cDNA sequence, and mRNA distribution. Genomics 20: 377-385.

CHROMOSOMAL LOCATION

Genetic locus: FOXA1 (human) mapping to 14q21.1; Foxa1 (mouse) mapping to 12 C1.

SOURCE

HNF-3α (A-3) is a mouse monoclonal antibody raised against amino acids 51-170 of HNF-3α of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} 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-514695 X, 200 µg/0.1 ml.

HNF-3α (A-3) is available conjugated to agarose (sc-514695 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-514695 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514695 PE), fluorescein (sc-514695 FITC), Alexa Fluor® 488 (sc-514695 AF488), Alexa Fluor® 546 (sc-514695 AF546), Alexa Fluor® 594 (sc-514695 AF594) or Alexa Fluor® 647 (sc-514695 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514695 AF680) or Alexa Fluor® 790 (sc-514695 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

HNF-3α (A-3) is recommended for detection of HNF-3α 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).

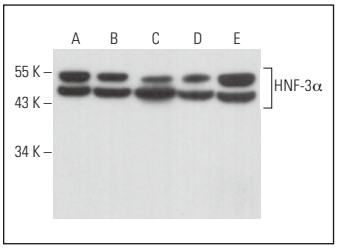
Suitable for use as control antibody for HNF-3α siRNA (h): sc-37930, HNF-3α siRNA (m): sc-37931, HNF-3α shRNA Plasmid (h): sc-37930-SH, HNF-3α shRNA Plasmid (m): sc-37931-SH, HNF-3α shRNA (h) Lentiviral Particles: sc-37930-V and HNF-3α shRNA (m) Lentiviral Particles: sc-37931-V.

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

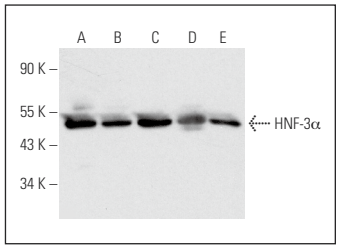
Molecular Weight of HNF-3α: 50 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HeLa nuclear extract: sc-2120 or A549 cell lysate: sc-2413.

DATA



HNF-3α (A-3): sc-514695. Western blot analysis of HNF-3α expression in HeLa nuclear extract (**A**) and MCF7 (**B**), SK-BR-3 (**C**), PC-3 (**D**) and F9 (**E**) whole cell lysates.



HNF-3α (A-3): sc-514695. Western blot analysis of HNF-3α expression in DU 145 (**A**) and HeLa (**B**) nuclear extracts and Hep G2 (**C**), LNCaP (**D**) and A549 (**E**) whole cell lysates.

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. Yamada, N., et al. 2019. Characterizing protein-DNA binding event subtypes in ChIP-exo data. Bioinformatics 35: 903-913.
3. Mae, S.I., et al. 2020. Expansion of human iPSC-derived ureteric bud organoids with repeated branching potential. Cell Rep. 32: 107963.
4. Wright, W.E., et al. 2021. FOXP1 interacts with MyoD to repress its transcription and myoblast conversion. J. Cell. Signal. 2: 9-26.
5. Takahashi, F., et al. 2022. Immune-mediated neurodegenerative trait provoked by multimodal derepression of long-interspersed nuclear element-1. iScience 25: 104278.
6. Ma, W. and Hu, J. 2023. The linear ANRIL transcript P14AS regulates the NFκB signaling to promote colon cancer progression. Mol. Med. 29: 162.

RESEARCH USE

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