

# HNF-3 $\alpha$ (T-20): sc-9186

## BACKGROUND

HNF-1 ( $\alpha$  and  $\beta$ ), HNF-3 ( $\alpha$ ,  $\beta$  and  $\gamma$ ), HNF-4 ( $\alpha$  and  $\gamma$ ), 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 $\alpha$ , HNF-3 $\beta$  and HNF-3 $\gamma$  regulate the transcription of numerous hepatocyte genes in adult liver. HNF-3 $\alpha$  and HNF-3 $\beta$  have also been shown to be involved in gastrulation events such as body axis formation. HNF-4 $\alpha$  and HNF-4 $\gamma$  have been shown to be important for early embryo development. HNF-4 $\alpha$  is expressed in liver, kidney, pancreas, small intestine, testis and colon; and HNF-4 $\gamma$  is expressed in each of these tissues except liver. HNF-6 has been shown to bind to the promoter of HNF-3 $\beta$ , 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  $\alpha$ -1 antitrypsin.

## CHROMOSOMAL LOCATION

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

## SOURCE

HNF-3 $\alpha$  (T-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of HNF-3 $\alpha$  of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g 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-9186 X, 200  $\mu$ g/0.1 ml.

Blocking peptide available for competition studies, sc-9186 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

HNF-3 $\alpha$  (T-20) is recommended for detection of HNF-3 $\alpha$  of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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 $\alpha$  (T-20) is also recommended for detection of HNF-3 $\alpha$  in additional species, including bovine and porcine.

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

HNF-3 $\alpha$  (T-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

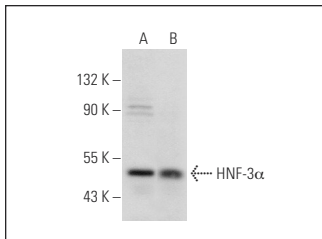
Molecular Weight of HNF-3 $\alpha$ : 50 kDa.

Positive Controls: Hep G2 nuclear extract: sc-364819, DU 145 nuclear extract: sc-24960 or HeLa nuclear extract: sc-2120.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



HNF-3 $\alpha$  (T-20): sc-9186. Western blot analysis of HNF-3 $\alpha$  expression in Hep G2 whole cell lysate (A) and Hep G2 nuclear extract (B).

## SELECT PRODUCT CITATIONS

- Bort, R., et al. 2004. Role of hepatocyte nuclear factor 3  $\gamma$  in the expression of human CYP2C genes. Arch. Biochem. Biophys. 426: 63-72.
- Fang, Q., et al. 2012. Functional analyses of the mutation nt-128 T→G in the hepatocyte nuclear factor-1 $\alpha$  promoter region in Chinese diabetes pedigrees. Diabet. Med. 29: 1456-1464.
- Walker, S.R., et al. 2013. STAT5 outcompetes STAT3 to regulate the expression of the oncogenic transcriptional modulator Bcl6. Mol. Cell. Biol. 33: 2879-2890.
- Sakaeda, M., et al. 2013. Neural lineage-specific homeoprotein BRN2 is directly involved in TTF1 expression in small-cell lung cancer. Lab. Invest. 93: 408-421.

## STORAGE

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

## RESEARCH USE

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



Try **HNF-3 $\alpha$  (A-3): sc-514695** or **HNF-3 $\alpha$  (Q-6): sc-101058**, our highly recommended monoclonal alternatives to HNF-3 $\alpha$  (T-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **HNF-3 $\alpha$  (A-3): sc-514695**.