

# AFP (C-19): sc-8108

## BACKGROUND

$\alpha$ -fetoprotein (AFP) is expressed in fetal liver at varying levels throughout development and is present only in trace amounts in normal adult tissues. AFP can be detected at abnormally high concentrations in hepatocellular carcinomas as well as in the plasma and ascitic fluid of adults with hepatoma. High AFP concentrations have been correlated with tumor cell growth, indicating that AFP can serve as a tumor marker. AFP binds copper, nickel and fatty acids, and in some cases may bind serum albumin or estrogen. It has been demonstrated that the AFP promoter is a target for NF-1 (nuclear factor-1), HNF-1 (hepatocyte nuclear factor-1) and C/EBP transcription factors. While HNF-1 binding to the AFP promoter results in AFP expression, NF-1 binding results in a decrease in AFP promoter activity.

## CHROMOSOMAL LOCATION

Genetic locus: AFP (human) mapping to 4q13.3; Afp (mouse) mapping to 5 E2.

## SOURCE

AFP (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of AFP of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as HRP conjugate for Western blotting, sc-8108 HRP, 200  $\mu$ g/1 ml.

Available as fluorescein (sc-8108 FITC) or rhodamine (sc-8108 TRITC) conjugates for immunofluorescence, 200  $\mu$ g/1 ml.

Available as rhodamine conjugate for immunofluorescence, sc-8108 TRITC, 200  $\mu$ g/1 ml.

Blocking peptide available for competition studies, sc-8108 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

AFP (C-19) is recommended for detection of AFP 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).

AFP (C-19) is also recommended for detection of AFP in additional species, including canine.

Suitable for use as control antibody for AFP siRNA (h): sc-29648, AFP siRNA (m): sc-29649, AFP shRNA Plasmid (h): sc-29648-SH, AFP shRNA Plasmid (m): sc-29649-SH, AFP shRNA (h) Lentiviral Particles: sc-29648-V and AFP shRNA (m) Lentiviral Particles: sc-29649-V.

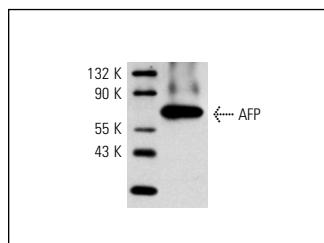
Molecular Weight of AFP: 68 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or Jurkat whole cell lysate: sc-2204.

## STORAGE

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

## DATA



AFP (C-19): sc-8108. Western blot analysis of human purified  $\alpha$  fetoprotein.

## SELECT PRODUCT CITATIONS

- Hartner, J.C., et al. 2004. Liver disintegration in the mouse embryo caused by deficiency in the RNA-editing enzyme ADAR1. *J. Biol. Chem.* 279: 4894-4902.
- Cavin L.G., et al. 2004. Regulation of  $\alpha$ -fetoprotein by nuclear factor- $\kappa$ B protects hepatocytes from tumor necrosis factor- $\alpha$  cytotoxicity during fetal liver development and hepatic oncogenesis. *Cancer Res.* 64: 7030-7038.
- Cui, R., et al. 2005. Family members p53 and p73 act together in chromatin modification and direct repression of  $\alpha$ -fetoprotein transcription. *J. Biol. Chem.* 280: 39152-39160.
- Tan, E.H., et al. 2005. CCAAT/enhancer binding protein  $\alpha$  knock-in mice exhibit early liver glycogen storage and reduced susceptibility to hepatocellular carcinoma. *Cancer Res.* 65: 10330-10337.
- Sary, M., et al. 2005. Parietal endoderm secreted SPARC promotes early cardiomyogenesis *in vitro*. *Exp. Cell Res.* 310: 331-343.
- Machka, C., et al. 2005. Identification of Dll1 (Delta1) target genes during mouse embryogenesis using differential expression profiling. *Gene Expr. Patterns* 6: 94-101.
- Liu, L., et al. 2007.  $\alpha$ -fetoprotein is dynamically expressed in rat pancreas during development. *Dev. Growth Differ.* 49: 669-681.
- Cho, C., et al. 2008. Homogeneous differentiation of hepatocyte-like cells from embryonic stem cells: applications for the treatment of liver failure. *FASEB.* 22: 898-909.
- Liu, X.Y., et al. 2009. Expression and location of  $\alpha$ -fetoprotein during rat colon development. *World J. Gastroenterol.* 15: 1738-1743.
- Farzaneh, Z., et al. 2010. Enhanced functions of human embryonic stem cell-derived hepatocyte-like cells on three-dimensional nanofibrillar surfaces. *Stem Cell Rev.* 6: 601-610.

## RESEARCH USE

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