Technical Data Sheet

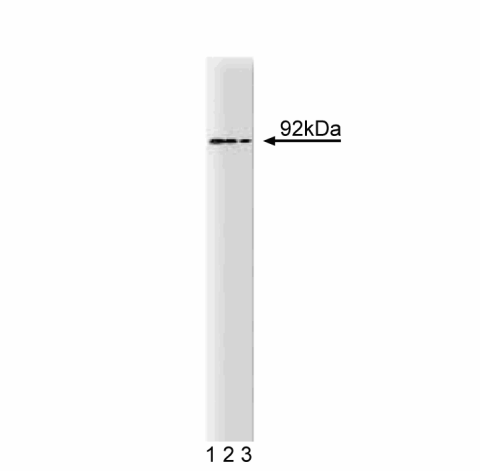
Purified Mouse Anti-HNF-1α

Product Information

Material Number:	**610902**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	2/HNF-1
Immunogen:	Mouse HNF-1 aa. 70-269
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Rat Tested in Development: Mouse, Human
Target MW:	92 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

HNF-1 (**H**epatocyte **N**uclear **F**actor **1**), a POU-homeodomain containing transcription factor, is a family member of liver-enriched transcription factors that also includes C-EBP, HNF-3, and HNF-4. Although HNF-1 exhibits elevated expression in liver and is thought to be involved in liver organogenesis, it is also found in kidney, stomach, intestine, and at a low level in thymus and spleen. A short N-terminal α-helical segment allows for HNF-1 homodimerization which is followed by DNA binding via an atypical helix-turn-helix motif. The HNF-1 dimer transactivates hepatic genes such as α- and β-fibrinogen, α-fetoprotein, albumin, α-L-antitrypsin, and pyruvate kinase by binding to a highly conserved 13 bp inverted palindromic sequence, GTTAATNATTAAC. HNF-1 represses its own transcription and data suggests that there is coordinate regulation between HNF-1 and HNF-4. Although HNF-4 induces HNF-1 transcription, HNF-1 downregulates HNF-4 activity by binding to the AF2 region in the activation domain of HNF-4. The ability of HNF-1 to dictate the production or activity of itself and other transcription factors indicates its possible function as a general cellular control mechanism.



Western blot analysis of HNF-1α on a rat liver lysate.
Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the anti- HNF-1α antibody.

Preparation and Storage

Store undiluted at -20°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

Suggested Companion Products

Catalog Number	Name	Size	Clone
611467	Rat Liver Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
4. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

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Ktistaki E, Talianidis I. Modulation of hepatic gene expression by hepatocyte nuclear factor 1. *Science.* 1997; 277(5322):109-112. (Biology)

Kuo CJ, Conley PB, Hsieh CL, Francke U, Crabtree GR. Molecular cloning, functional expression, and chromosomal localization of mouse hepatocyte nuclear factor 1. *Proc Natl Acad Sci U S A.* 1990; 87(24):9838-9842. (Biology)

Tian JM, Schibler U. Tissue-specific expression of the gene encoding hepatocyte nuclear factor 1 may involve hepatocyte nuclear factor 4. *Genes Dev.* 1991; 5(12A):2225-2234. (Biology)