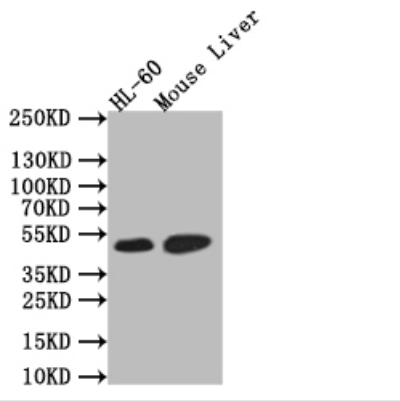
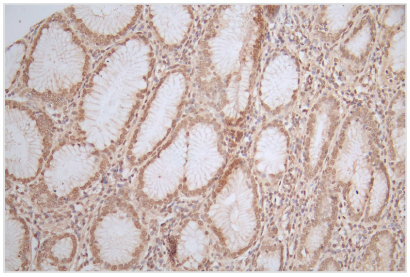
HNF4A Recombinant Monoclonal Antibody

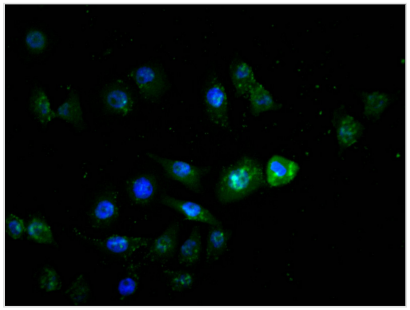
Product Code	CSB-RA571090A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P41235
Immunogen	A synthesized peptide derived from Human HNF4A
Species Reactivity	Human, Rat
Tested Applications	ELISA, WB, IHC, IF, FC; Recommended dilution: WB:1:500-1:2000, IHC:1:50-1:200, IF:1:50-1:200, FC:1:50-1:200
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Epigenetics and Nuclear Signaling;Cancer?Cardiovascular;Developmental biology;Metabolism;Signal transduction
Gene Names	HNF4A
Clone No.	10A7
Image	



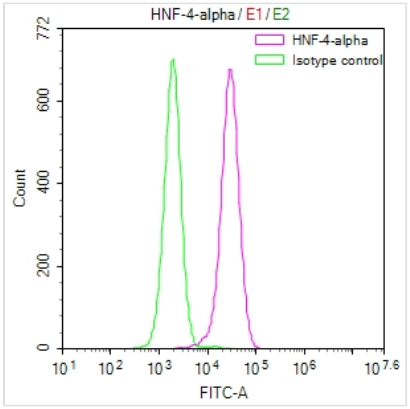
Western Blot
Positive WB detected in: HL-60 whole cell lysate,
Rat Liver tissue lysate,
All lanes: HNF-4-alpha antibody at 1:1000
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 52 kDa
Observed band size: 52 kDa



IHC image of CSB-RA571090A0HU diluted at 1:50 and staining in paraffin-embedded human gastric cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-rabbit polymer IgG labeled by HRP and visualized using 0.75% DAB.



Immunofluorescence staining of MCF-7 with CSB-RA571090A0HU at 1:20, counter-stained with DAPI. The cells were fixed in 4% formaldehyde and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4°C. The secondary antibody was Alexa Fluor 526-congugated AffiniPure Goat Anti-Rabbit IgG(H+L).



Overlay Peak curve showing HepG2 cells stained with CSB-RA571090A0HU (red line) at 1:50. The cells were fixed in 4% formaldehyde and permeated by 0.2% TritonX-100. Then 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (1μg/1*10^6cells) for 45min at 4?. The secondary antibody used was FITC-conjugated Goat Anti-rabbit IgG(H+L) at 1:200 dilution for 35min at 4?.Control antibody (green line) was rabbit IgG (1μg/1*10^6cells) used under the same conditions. Acquisition of >10,000 events was performed.

Description

A recombinant monoclonal antibody targeting HNF4A was generated through a series of steps. Initially, a rabbit was immunized with a synthesized peptide derived from human HNF4A protein. B cells were then isolated from the immunized rabbit, and RNA was extracted from these cells. The RNA was reverse-transcribed into cDNA, which was utilized as a template to extend HNF4A antibody genes using degenerate primers. These engineered HNF4A antibody genes were incorporated into a plasmid vector and introduced into host cells for expression. The resultant HNF4A recombinant monoclonal antibody was subsequently purified from the cell culture supernatant via affinity chromatography and evaluated for its performance in ELISA, WB, IHC, IF, and FC applications, demonstrating specific recognition of human and rat HNF4A protein.

The HNF4A protein is a critical transcription factor that regulates gene expression in various tissues, with a primary focus on the liver. Its functions are essential for maintaining metabolic homeostasis, organ development, and the proper functioning of multiple physiological processes, including glucose and

lipid metabolism, detoxification, and pancreatic function.