

**DESCRIPTION**

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human HNF-4 $\alpha$ /NR2A1 in ELISAs and Western blots.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 843716
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human HNF-4 $\alpha$ /NR2A1 Val130-Ser330 Accession # P41235
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 $\mu$ m filtered solution in PBS.

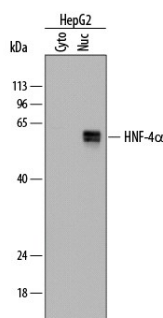
**APPLICATIONS**

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	1 $\mu$ g/mL	See Below
<b>Immunocytochemistry</b>	8-25 $\mu$ g/mL	See Below
<b>Intracellular Staining by Flow Cytometry</b>	0.25 $\mu$ g/10 <sup>6</sup> cells	See Below
<b>Simple Western</b>	10 $\mu$ g/mL	See Below

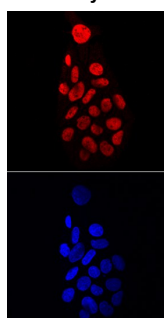
**DATA**

**Western Blot**



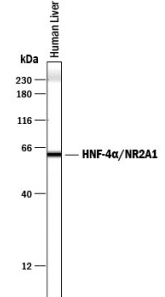
**Detection of Human HNF-4 $\alpha$ /NR2A1 by Western Blot.** Western blot shows lysates of HepG2 human hepatocellular carcinoma cell line. Gels were loaded with 10  $\mu$ g of cytoplasmic (Cyto) and 5  $\mu$ g of nuclear (Nuc) extracts. PVDF membrane was probed with 1  $\mu$ g/mL of Mouse Anti-Human HNF-4 $\alpha$ /NR2A1 Monoclonal Antibody (Catalog # MAB4605) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). Specific bands were detected for HNF-4 $\alpha$ /NR2A1 at approximately 50-55 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

**Immunocytochemistry**




**HNF-4 $\alpha$ /NR2A1 in HepG2 Human Cell Line.** HNF-4 $\alpha$ /NR2A1 was detected in immersion fixed HepG2 human hepatocellular carcinoma cell line using Mouse Anti-Human HNF-4 $\alpha$ /NR2A1 Monoclonal Antibody (Catalog # MAB4605) at 10  $\mu$ g/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red, upper panel; Catalog # NL007) and counterstained with DAPI (blue, lower panel). Specific staining was localized to nuclei. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

**Simple Western**

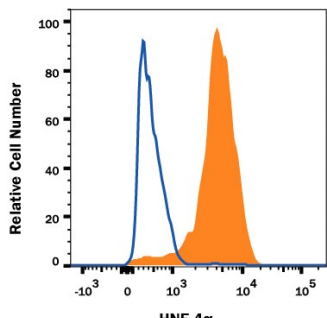


**Detection of Human HNF-4 $\alpha$ /NR2A1 by Simple Western™.** Simple Western lane view shows lysates of human liver tissue, loaded at 0.2 mg/mL. A specific band was detected for HNF-4 $\alpha$ /NR2A1 at approximately 62 kDa (as indicated) using 10  $\mu$ g/mL of Mouse Anti-Human HNF-4 $\alpha$ /NR2A1 Monoclonal Antibody (Catalog # MAB4605). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

Non-specific interaction with the 230 kDa Simple Western standard may be seen with this antibody.

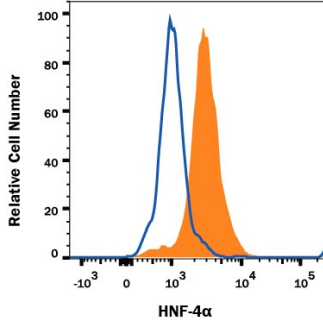


**Intracellular Staining by Flow Cytometry**



**Detection of HNF-4 $\alpha$ /NR2A1 in HepG2 Human Cell Line by Flow Cytometry.** HepG2 human hepatocellular carcinoma cell line was stained with Mouse Anti-Human HNF-4 $\alpha$ /NR2A1 Monoclonal Antibody (Catalog # MAB4605, filled histogram) or isotype control antibody (Catalog # MAB0041, open histogram) followed by PE-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0102B). To facilitate intracellular staining, cells were fixed and permeabilized with FlowX FoxP3/Transcription Factor Fixation & Permeabilization Buffer Kit (Catalog # FC012). View our protocol for [Staining Intracellular Molecules](#).

**Intracellular Staining by Flow Cytometry**



**Detection of HNF-4 alpha/NR2A1 in Human Endodermal Cells by Flow Cytometry.** BG01V human embryonic stem cell line differentiated to endodermal cells (StemXVivo Endoderm Kit, Catalog # SC019B) was stained with Mouse Anti-Human HNF-4 alpha/NR2A1 Monoclonal Antibody (Catalog # MAB4605, filled histogram or isotype control antibody (Catalog # MAB0041, open histogram) followed by PE-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0102B). To facilitate intracellular staining, cells were fixed and permeabilized with FlowX FoxP3/Transcription Factor Fixation & Permeabilization Buffer Kit (Catalog # FC012). View our protocol for [Staining Intracellular Molecules](#).

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.5 mg/mL.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**BACKGROUND**

HNF-4 $\alpha$  is a transcription factor that binds DNA as a homodimer. HNF-4 $\alpha$  is important in liver, kidney, and intestinal development. It has also been intensely studied as one of a variety of genes responsible for diabetes mellitus. HNF-4 $\alpha$  has been shown in knock out mice to be essential for the morphogenic and functional differentiation of hepatocytes. HNF-4 $\alpha$  is a dominant regulator of epithelial phenotypes able to drive the mesenchymal-to-epithelial transition when expressed in fibroblasts.