

# Anti-HNF-4-alpha Antibody Picoband™ (monoclonal, 6C8E9)

Catalog # ABO16262

## Product Information

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|--------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| <b>Application</b>       | WB, IHC                                                                                                                         |
| <b>Primary Accession</b> | <a href="#">P41235</a>                                                                                                          |
| <b>Host</b>              | Mouse                                                                                                                           |
| <b>Isotype</b>           | Mouse IgG2a                                                                                                                     |
| <b>Reactivity</b>        | Rat, Human                                                                                                                      |
| <b>Clonality</b>         | Monoclonal                                                                                                                      |
| <b>Format</b>            | Lyophilized                                                                                                                     |
| <b>Description</b>       | Anti-HNF-4-alpha Antibody Picoband™ (monoclonal, 6C8E9) . Tested in IHC, WB applications. This antibody reacts with Human, Rat. |
| <b>Reconstitution</b>    | Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.                                                       |

## Additional Information

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| <b>Gene ID</b>                         | 3172                                                                                                                                                                                                             |
| <b>Other Names</b>                     | Hepatocyte nuclear factor 4-alpha, HNF-4-alpha, Nuclear receptor subfamily 2 group A member 1, Transcription factor 14, TCF-14, Transcription factor HNF-4, HNF4A, HNF4, NR2A1, TCF14                            |
| <b>Calculated MW</b>                   | 52785                                                                                                                                                                                                            |
| <b>Application Details</b>             | Western blot, 0.25-0.5 µg/ml, Human, Rat<br>Immunohistochemistry(Paraffin-embedded Section), 2-5 µg/ml, Rat                                                                                                      |
| <b>Source</b>                          | Eukaryota                                                                                                                                                                                                        |
| <b>Contents</b>                        | Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> .                                                                                                                     |
| <b>Clone Names</b><br><b>Immunogen</b> | Clone: 6C8E9<br>E.coli-derived human HNF-4-alpha recombinant protein (Position: Q164-I474). Human HNF-4-alpha shares 95% and 96% amino acid (aa) sequence identity with mouse and rat HNF-4-alpha, respectively. |
| <b>Purification</b>                    | Immunogen affinity purified.                                                                                                                                                                                     |
| <b>Storage</b>                         | At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.                |

## Protein Information

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|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name              | HNF4A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Synonyms          | HNF4, NR2A1, TCF14                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Function          | Transcriptional regulator which controls the expression of hepatic genes during the transition of endodermal cells to hepatic progenitor cells, facilitating the recruitment of RNA pol II to the promoters of target genes (PubMed: <a href="#">30597922</a> ). Activates the transcription of CYP2C38 (By similarity). Represses the CLOCK-BMAL1 transcriptional activity and is essential for circadian rhythm maintenance and period regulation in the liver and colon cells (PubMed: <a href="#">30530698</a> ). |
| Cellular Location | Nucleus.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

## Background

Hepatocyte nuclear factor 4 alpha (HNF4A), also known as NR2A1, is a nuclear receptor that in humans is encoded by the HNF4A gene. It is mapped to 20q13.12. HNF4A is a nuclear transcription factor that binds DNA as a homodimer. The encoded protein controls the expression of several genes, including hepatocyte nuclear factor 1 alpha, a transcription factor which regulates the expression of several hepatic genes. This gene plays a role in development of the liver, kidney, and intestines. HNF4A is required for the PXR and CAR-mediated transcriptional activation of CYP3A4. This gene also plays a pivotal role in the expression and synthesis of SHBG, an important glycoprotein made primarily in the liver, which in addition to lowering insulin-resistance also serves in reducing levels of free Oestrogen as-well as prolonging the half-life of Testosterone.

## Images

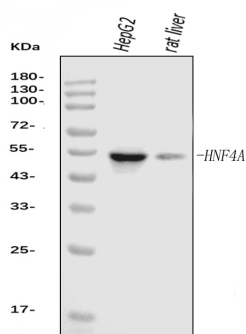
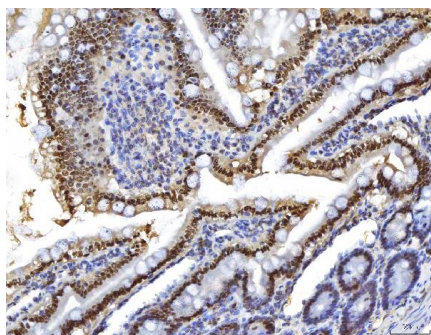


Figure 1. Western blot analysis of HNF-4-alpha using anti-HNF-4-alpha antibody (M00179-1). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human HepG2 whole cell lysates, Lane 2: rat liver tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-HNF-4-alpha antigen affinity purified monoclonal antibody (Catalog # M00179-1) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for HNF-4-alpha at approximately 53 kDa. The expected band size for HNF-4-alpha is at 53 kDa.

Figure 2. IHC analysis of HNF-4-alpha using anti-HNF-4-alpha antibody (M00389-2). HNF-4-alpha was detected in a paraffin-embedded section of rat colon tissue. Heat mediated antigen



retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-HNF-4-alpha Antibody (M00389-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

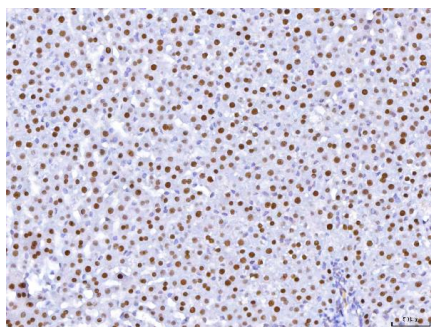


Figure 3. IHC analysis of HNF-4-alpha using anti-HNF-4-alpha antibody (M00389-2). HNF-4-alpha was detected in a paraffin-embedded section of rat liver tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-HNF-4-alpha Antibody (M00389-2) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.