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Anti-Histone H1.0/H1F0 Antibody Picoband™ (monoclonal, 5I3E6)

Catalog # ABO16260

Product Information

Application	WB, IHC, FC
Primary Accession	P07305
Host	Mouse
Isotype	Mouse IgG2b
Reactivity	Human, Mouse
Clonality	Monoclonal
Format	Lyophilized
Description	Anti-Histone H1.0/H1F0 Antibody Picoband™ (monoclonal, 5I3E6) . Tested in Flow Cytometry, IHC, WB applications. This antibody reacts with Human, Mouse.
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500 □g/ml.

Additional Information

Gene ID	3005
Other Names	Histone H1.0, Histone H1', Histone H1(0), Histone H1.0, N-terminally processed, H1-0 (HGNC:4714)
Calculated MW	20863
Application Details	Western blot, 0.25-0.5 □g/ml, Human Immunohistochemistry(Paraffin-embedded Section), 2-5 □g/ml, Human, Mouse Flow Cytometry, 1-3 □g/1x10^6 cells, Human
Source	Eukaryota
Contents	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
Clone Names	Clone: 5I3E6
Immunogen	E.coli-derived human Histone H1.0/H1F0 recombinant protein (Position: K20-K159).
Purification	Immunogen affinity purified.
Storage	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

Name	H1-0 (HGNC:4714)
Function	Histone H1 protein binds to linker DNA between nucleosomes forming the macromolecular structure known as the chromatin fiber (PubMed:33238161). Histones H1 are necessary for the condensation of nucleosome chains into higher-order structured fibers and promote formation of the H3K27me3 mark by the PRC2/EED-EZH2 complex (PubMed:33238161). The histones H1.0 are found in cells that are in terminal stages of differentiation or that have low rates of cell division (PubMed:7374750).
Cellular Location	Nucleus {ECO:0000255|PROSITE-ProRule:PRU00837, ECO:0000269|PubMed:18993075}. Nucleus, nucleolus. Chromosome {ECO:0000255|PROSITE- ProRule:PRU00837, ECO:0000269|PubMed:18993075, ECO:0000269|PubMed:25645921, ECO:0000269|PubMed:38530350} Note=Enriched at nucleolus-associated DNA repeats and chromatin domains (PubMed:25645921). During mitosis, it appears in the vicinity of condensed chromosomes (PubMed:18993075). The RNA edited version has been localized to nuclear speckles (PubMed:18993075). Comparted to other H1 histones, shows a less pronounced peripheral nuclear localization (PubMed:38530350).

Background

H1 histone family, member 0is a member of thehistonefamily of nuclearproteinswhich are a component ofchromatin. In humans, this protein is encoded by theH1F0gene. It is mapped to 22q13.1. Histones are basic nuclear proteins that are responsible for the nucleosome structure of the chromosomal fiber in eukaryotes. Nucleosomes consist of approximately 146 bp of DNA wrapped around a histone octamer composed of pairs of each of the four core histones (H2A, H2B, H3, and H4). The chromatin fiber is further compacted through the interaction of a linker histone, H1, with the DNA between the nucleosomes to form higher order chromatin structures. This gene is intronless and encodes a replication-independent histone that is a member of the histone H1 family.

Images

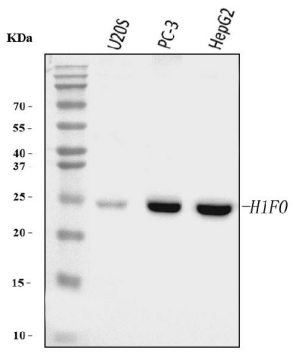


Figure 1. Western blot analysis of Histone H1.0/H1F0 using anti-Histone H1.0/H1F0 antibody (M08821-2). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human U20S whole cell lysates,
Lane 2: human PC-3 whole cell lysates,
Lane 3: human HepG2 whole cell 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-Histone H1.0/H1F0 antigen affinity purified monoclonal antibody (Catalog # M08821-2) 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 Histone H1.0/H1F0 at approximately 24 kDa. The expected band size for Histone H1.0/H1F0 is at 24 kDa.

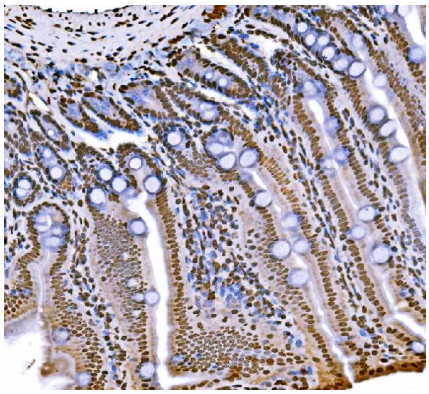


Figure 2. IHC analysis of Histone H1.0/H1F0 using anti-Histone H1.0/H1F0 antibody (M08821-2). Histone H1.0/H1F0 was detected in a paraffin-embedded section of mouse colon tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-Histone H1.0/H1F0 Antibody (M08821-2) 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.

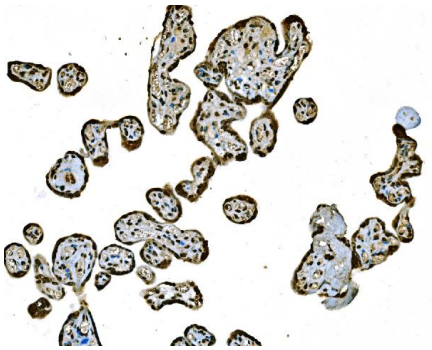


Figure 3. IHC analysis of Histone H1.0/H1F0 using anti-Histone H1.0/H1F0 antibody (M08821-2). Histone H1.0/H1F0 was detected in a paraffin-embedded section of human placenta tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-Histone H1.0/H1F0 Antibody (M08821-2) 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.

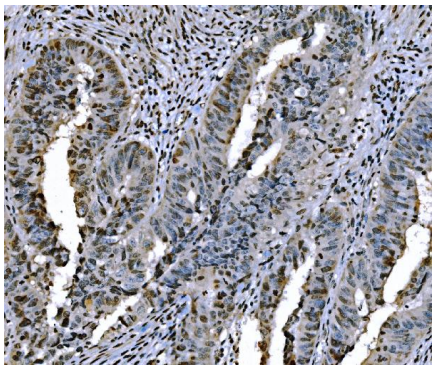
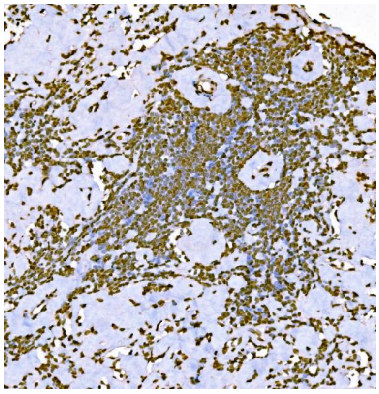


Figure 4. IHC analysis of Histone H1.0/H1F0 using anti-Histone H1.0/H1F0 antibody (M08821-2). Histone H1.0/H1F0 was detected in a paraffin-embedded section of human differentiated adenocarcinoma of the rectum tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-Histone H1.0/H1F0 Antibody (M08821-2) 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 5. IHC analysis of Histone H1.0/H1F0 using anti-Histone H1.0/H1F0 antibody (M08821-2). Histone H1.0/H1F0 was detected in a paraffin-embedded section of human Hodgkin's lymphoma 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-Histone H1.0/H1F0 Antibody (M08821-2) 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.

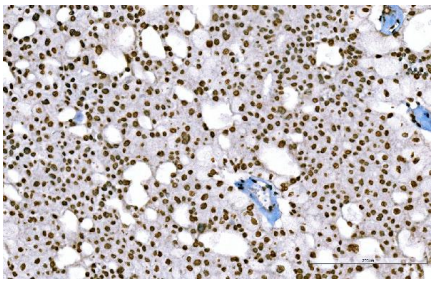


Figure 6. IHC analysis of Histone H1.0/H1F0 using anti-Histone H1.0/H1F0 antibody (M08821-2). Histone H1.0/H1F0 was detected in a paraffin-embedded section of human renal cell carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-Histone H1.0/H1F0 Antibody (M08821-2) 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.

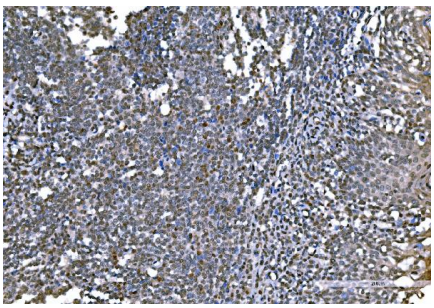


Figure 7. IHC analysis of Histone H1.0/H1F0 using anti-Histone H1.0/H1F0 antibody (M08821-2). Histone H1.0/H1F0 was detected in a paraffin-embedded section of human tonsil tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-Histone H1.0/H1F0 Antibody (M08821-2) 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.

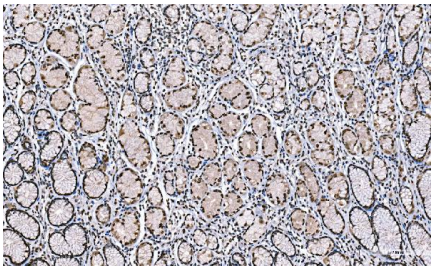
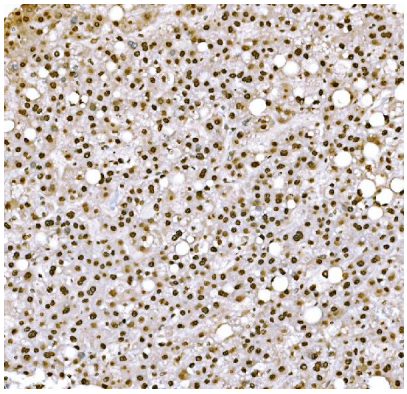


Figure 8. IHC analysis of Histone H1.0/H1F0 using anti-Histone H1.0/H1F0 antibody (M08821-2). Histone H1.0/H1F0 was detected in a paraffin-embedded section of human gastric carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-Histone H1.0/H1F0 Antibody (M08821-2) 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 9. IHC analysis of Histone H1.0/H1F0 using anti-Histone H1.0/H1F0 antibody (M08821-2). Histone H1.0/H1F0 was detected in a paraffin-embedded



section of human liver cancer 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-Histone H1.0/H1F0 Antibody (M08821-2) 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.

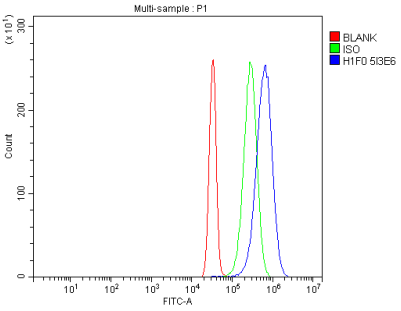


Figure 10. Flow Cytometry analysis of SiHa cells using anti-Histone H1.0/H1F0 antibody (M08821-2). Overlay histogram showing SiHa cells stained with M08821-2 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-Histone H1.0/H1F0 Antibody (M08821-2, 1 µg/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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