# Anti-PTBP1 Antibody [5C1]

## M1701-7

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|---|---|
| **Product Type:** | Mouse monoclonal IgG1, primary antibodies |
| **Species reactivity:** | Human, Mouse, Rat |
| **Applications:** | WB, IHC-P, IF-Cell |
| **Molecular Wt:** | Predicted band size: 60 kDa |
| **Clone number:** | 5C1 |

**Description:** Heterogeneous nuclear ribonucleoproteins (hnRNPs) constitute a set of polypeptides that contribute to mRNA transcription and pre-mRNA processing as well as mature mRNA transport to the cytoplasm and translation. They also bind heterogeneous nuclear RNA (hnRNA), which are the transcripts produced by RNA polymerase II. There are approximately 20 known hnRNP proteins, and their complexes are the major constituents of the spliceosome. The majority of hnRNP proteins components are localized to the nucleus; however some shuttle between the nucleus and the cytoplasm. hnRNP I, also designated polypyrimidine tract-binding protein (PTB), and its homolog hnRNP L bind to the 3' end of introns to modulate alternative splicing mechanisms of pre-mRNAs in normal cells and the translation of several viruses, including hepatitis C virus (HCV). The human hnRNP I gene maps to chromosome 19p13.3 and encodes a protein that is localized in the nucleoplasm. hnRNP L, like hnRNP I, is also localized in the nucleoplasm.

**Immunogen:** Synthetic peptide within Human PTBP1 aa 1-50 / 531.

**Positive control:** HeLa cell lysate, HepG2 cell lysate, Jurkat cell lysate, K-562 cell lysate, 293T cell lysate, SW620 cell lysate, A431 cell lysate, A549 cell lysate, NIH/3T3 cell lysate, C6 cell lysate, human kidney tissue lysate, mouse kidney tissue lysates, HeLa, human kidney tissue, human colon cancer tissue, human breast cancer tissue, human placental tissue, mouse kidney tissue, rat kidney tissue.

**Subcellular location:** Nucleus.

**Database links:** SwissProt: P26599 Human | P17225 Mouse | Q00438 Rat

**Recommended Dilutions:**

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| **WB** | 1:500-1:2,000 |
| **IHC-P** | 1:400-1:2,000 |
| **IF-Cell** | 1:100 |

**Storage Buffer:** 1*PBS (pH7.4), 0.2% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.

**Storage Instruction:** Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

**Purity:** Immunogen affinity purified.

## Images

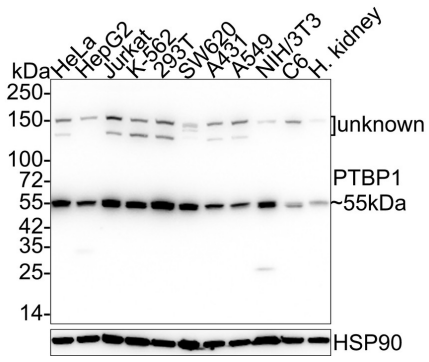


**Fig1:** Western blot analysis of PTBP1 on different lysates with Mouse anti-PTBP1 antibody (M1701-7) at 1/1,000 dilution.

Lane 1: HeLa cell lysate (20 µg/Lane)
Lane 2: HepG2 cell lysate (20 µg/Lane)
Lane 3: Jurkat cell lysate (20 µg/Lane)
Lane 4: K-562 cell lysate (20 µg/Lane)
Lane 5: 293T cell lysate (20 µg/Lane)
Lane 6: SW620 cell lysate (20 µg/Lane)
Lane 7: A431 cell lysate (20 µg/Lane)
Lane 8: A549 cell lysate (20 µg/Lane)
Lane 9: NIH/3T3 cell lysate (20 µg/Lane)
Lane 10: C6 cell lysate (20 µg/Lane)
Lane 11: Human kidney tissue lysate (40 µg/Lane)

Predicted band size: 60 kDa
Observed band size: 55 kDa

Exposure time: 20 seconds;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (M1701-7) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

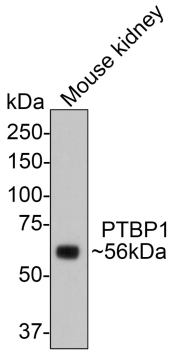


**Fig2:** Western blot analysis of PTBP1 on mouse kidney tissue lysates with Mouse anti-PTBP1 antibody (M1701-7) at 1/1,000 dilution.

Lysates/proteins at 20 µg/Lane.

Predicted band size: 56 kDa
Observed band size: 56 kDa

Exposure time: 2 minutes;

8% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (M1701-7) at 1/1,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1:100,000 dilution was used for 1 hour at room temperature.

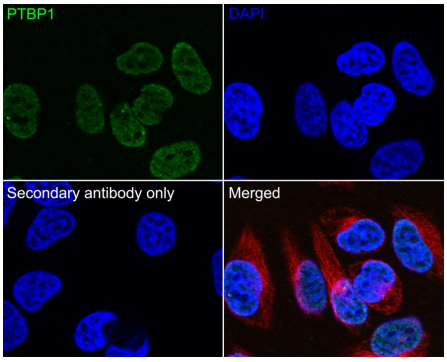


**Fig3:** Immunocytochemistry analysis of HeLa cells labeling PTBP1 with Mouse anti-PTBP1 antibody (M1701-7) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 20 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Mouse anti-PTBP1 antibody (M1701-7) at 1/100 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Mouse IgG H&L (iFluor™ 488, HA1125) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

beta Tubulin (ET1602-4, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Rabbit IgG H&L (iFluor™ 594, HA1122) were used as the secondary antibody at 1/1,000 dilution.

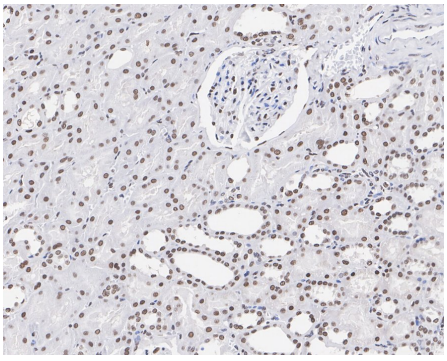

**Fig4:** Immunohistochemical analysis of paraffin-embedded human kidney tissue with Mouse anti-PTBP1 antibody (M1701-7) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with dd$H_2O$ and PBS, and then probed with the primary antibody (M1701-7) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

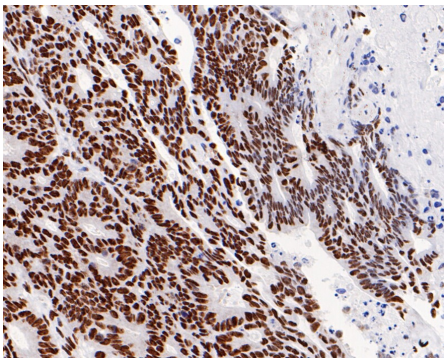

**Fig5:** Immunohistochemical analysis of paraffin-embedded human colon cancer tissue with Mouse anti-PTBP1 antibody (M1701-7) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with dd$H_2O$ and PBS, and then probed with the primary antibody (M1701-7) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

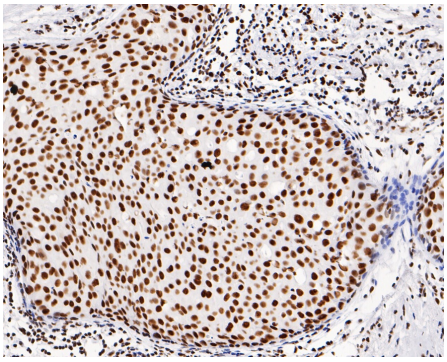

**Fig6:** Immunohistochemical analysis of paraffin-embedded human breast cancer tissue with Mouse anti-PTBP1 antibody (M1701-7) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with dd$H_2O$ and PBS, and then probed with the primary antibody (M1701-7) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

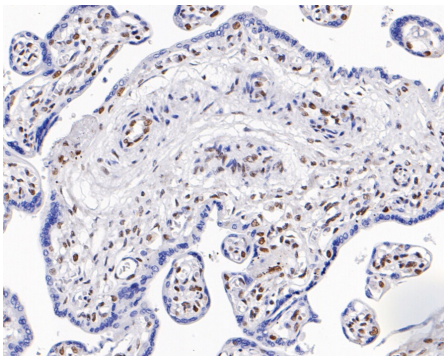

**Fig7:** Immunohistochemical analysis of paraffin-embedded human placental tissue with Mouse anti-PTBP1 antibody (M1701-7) at 1/400 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with dd$H_2O$ and PBS, and then probed with the primary antibody (M1701-7) at 1/400 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

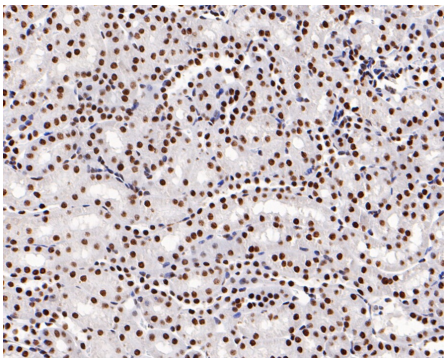

**Fig8:** Immunohistochemical analysis of paraffin-embedded mouse kidney tissue with Mouse anti-PTBP1 antibody (M1701-7) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with dd$H_2O$ and PBS, and then probed with the primary antibody (M1701-7) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

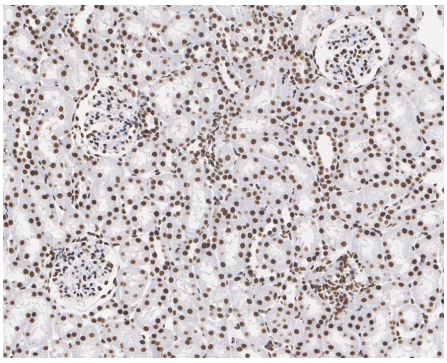

**Fig9:** Immunohistochemical analysis of paraffin-embedded rat kidney tissue with Mouse anti-PTBP1 antibody (M1701-7) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) for 2 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with dd$H_2O$ and PBS, and then probed with the primary antibody (M1701-7) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.



## Background References

1. Kalantari R et al. Stable association of RNAi machinery is conserved between the cytoplasm and nucleus of human cells. RNA 22:1085-98 (2016).
2. Conrad KD et al. MicroRNA-122 dependent binding of Ago2 protein to hepatitis C virus RNA is associated with enhanced RNA stability and translation stimulation. PLoS One 8:e56272 (2013).