# Anti-MAN2A1 Antibody [PSH02-67]

## HA721845

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|---|---|
| **Product Type:** | Recombinant Rabbit monoclonal IgG, primary antibodies |
| **Species reactivity:** | Human, Mouse, Rat |
| **Applications:** | WB, IHC-P, FC |
| **Molecular Wt:** | Predicted band size: 131 kDa |
| **Clone number:** | PSH02-67 |

**Description:** This gene encodes a glycosyl hydrolase that localizes to the Golgi and catalyzes the final hydrolytic step in the asparagine-linked oligosaccharide (N-glycan) maturation pathway. Mutations in the mouse homolog of this gene have been shown to cause a systemic autoimmune disease similar to human systemic lupus erythematosus. Catalyzes the first committed step in the biosynthesis of complex N-glycans. It controls conversion of high mannose to complex N-glycans; the final hydrolytic step in the N-glycan maturation pathway.

**Immunogen:** Recombinant protein within human MAN2A1 aa 51-500 / 1,144.

**Positive control:** HepG2 cell lysate, Huh7 cell lysate, JAR cell lysate, U-87 MG cell lysate, HUVEC cell lysate, A375 cell lysate, MDA-MB-468 cell lysate, NCI-H226 cell lysate, Human liver tissue lysate, Human lung tissue lysate, Human kidney tissue lysate, human colon cancer tissue, human stomach tissue, U-87 MG.

**Subcellular location:** Golgi apparatus membrane.

**Database links:** SwissProt: Q16706 Human

**Recommended Dilutions:**

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| **WB** | 1:1,000 |
| **IHC-P** | 1:1,000 |
| **FC** | 1:1,000 |

**Storage Buffer:** 1*TBS (pH7.4), 0.1% BSA, 40% 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:** Protein A affinity purified.

## Images

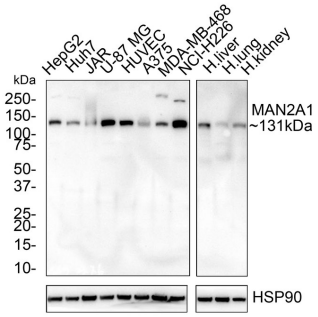


**Fig1:** Western blot analysis of MAN2A1 on different lysates with Rabbit anti-MAN2A1 antibody (HA721845) at 1/1,000 dilution.

Lane 1: HepG2 cell lysate
Lane 2: Huh7 cell lysate
Lane 3: JAR cell lysate
Lane 4:U-87 MG cell lysate
Lane 5: HUVEC cell lysate
Lane 6: A375 cell lysate
Lane 7: MDA-MB-468 cell lysate
Lane 8: NCI-H226 cell lysate
Lane 9: Human liver tissue lysate
Lane 10: Human lung tissue lysate
Lane 11: Human kidney tissue lysate

Lysates/proteins at 30 µg/Lane.

Predicted band size: 131 kDa
Observed band size: 131 kDa

Exposure time: 5 minutes; ECL: K1802;
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 (HA721845) at 1/1,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

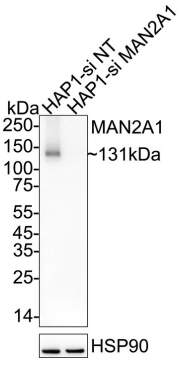


**Fig2:** Western blot analysis of MAN2A1 on different lysates with Rabbit anti-MAN2A1 antibody (HA721845) at 1/1,000 dilution.

Lane 1: HAP1-parental cell lysate (10 µg/Lane)
Lane 2: HAP1-MAN2A1 KD cell lysate (10 µg/Lane)

Predicted band size: 131 kDa
Observed band size: 131 kDa

Exposure time: 59 seconds; ECL: K1801;
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 (HA721845) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

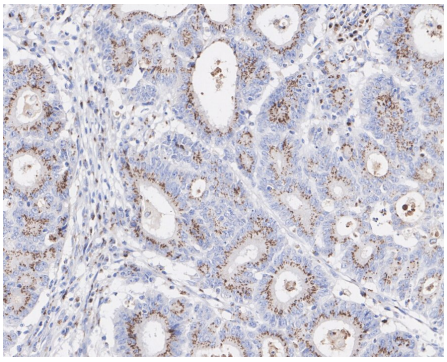

**Fig3:** Immunohistochemical analysis of paraffin-embedded human colon cancer tissue with Rabbit anti-MAN2A1 antibody (HA721845) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with $ddH_2O$ and PBS, and then probed with the primary antibody (HA721845) 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.

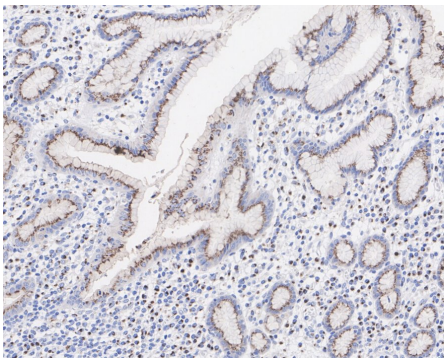

**Fig4:** Immunohistochemical analysis of paraffin-embedded human stomach tissue with Rabbit anti-MAN2A1 antibody (HA721845) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with $ddH_2O$ and PBS, and then probed with the primary antibody (HA721845) 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.

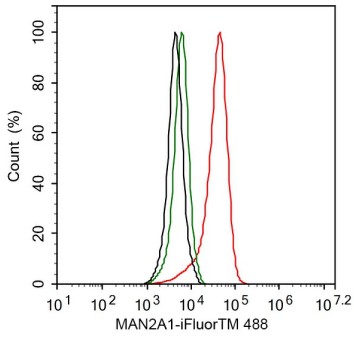


**Fig5:** Flow cytometric analysis of U-87 MG cells labeling MAN2A1.

Cells were washed twice with cold PBS and resuspend. Then stained with the primary antibody (HA721845, 1/1,000) (red) compared with Mouse IgG Isotype Control (green). After incubation of the primary antibody at +4℃ for an hour, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Mouse IgG Secondary antibody (HA1125) at 1/1,000 dilution for 30 minutes at +4℃. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).



## Background References

1. Zha K, Ye Q. Golgi a-mannosidase II mediates the formation of vascular smooth muscle foam cells under inflammatory stress. Folia Histochem Cytobiol. 2021;59(2):134-143. doi: 10.5603/FHC.a2021.0015. Epub 2021 Jun 21.
2. Morales-Quintana L, Méndez-Yáñez A. α-Mannosidase and β-D-N-acetylhexosaminidase outside the wall: partner exoglycosidases involved in fruit ripening process. Plant Mol Biol. 2023 Jun;112(3):107-117. doi: 10.1007/s11103-023-01356-2. Epub 2023 May 13.

Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation