Anti-ASGPR1 Antibody [PSH06-01]

HA722500

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Rat
Applications:	WB, IF-Cell, IHC-P, FC, IF-Tissue, IP
Molecular Wt:	Predicted band size: 33 kDa
Clone number:	PSH06-01

Description: Asialoglycoprotein receptor 1 is a protein that in humans is encoded by the ASGR1 gene. This gene encodes a subunit of the asialoglycoprotein receptor. This receptor is a transmembrane protein that plays a critical role in serum glycoprotein homeostasis by mediating the endocytosis and lysosomal degradation of glycoproteins with exposed terminal galactose or N-acetylgalactosamine residues. The asialoglycoprotein receptor may facilitate hepatic infection by multiple viruses including hepatitis B, and is also a target for liver-specific drug delivery. The asialoglycoprotein receptor is a hetero-oligomeric protein composed of major and minor subunits, which are encoded by different genes. The protein encoded by this gene is the more abundant major subunit. Alternatively spliced transcript variants encoding multiple isoforms have been observed for this gene.

Immunogen: Recombinant protein within human ASGPR1 aa 41-291.

Positive control: HepG2 cell lysate, Human liver tissue lysate, Rat liver tissue lysate, HepG2, human liver tissue, rat liver tissue.

Subcellular location: Membrane; Secreted.

Database links: SwissProt: P07306 Human | P02706 Rat

Recommended Dilutions:

WB	1:1,000
IF-Cell	1:100
IHC-P	1:4,000
FC	1:1,000
IF-Tissue	1:1,000
IP	1-2μg/sample

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

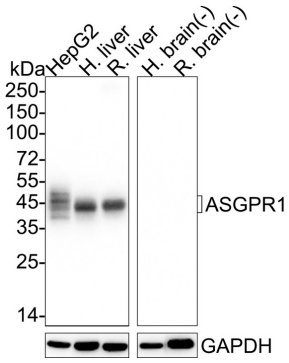

Fig1: Western blot analysis of ASGPR1 on different lysates with Rabbit anti-ASGPR1 antibody (HA722500) at 1/1,000 dilution.

Lane 1: HepG2 cell lysate (20 µg/Lane)
Lane 2: Human liver tissue lysate (40 µg/Lane)
Lane 3: Rat liver tissue lysate (40 µg/Lane)
Lane 4: Human brain tissue lysate (negative) (40 µg/Lane)
Lane 5: Rat brain tissue lysate (negative) (40 µg/Lane)

Predicted band size: 33 kDa
Observed band size: 40-50 kDa

Exposure time: 6 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 (HA722500) 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.

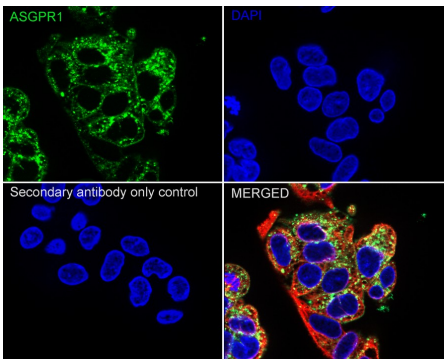

Fig2: Immunocytochemistry analysis of HepG2 cells labeling ASGPR1 with Rabbit anti-ASGPR1 antibody (HA722500) at 1/100 dilution.

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 Rabbit anti-ASGPR1 antibody (HA722500) at 1/100 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) 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 (M1305-2, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

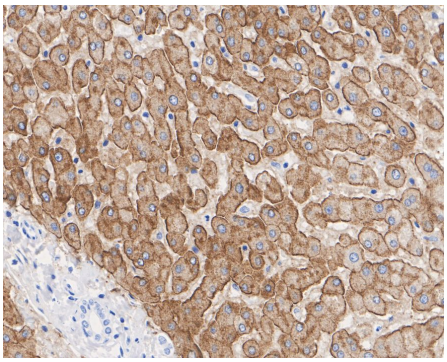

Fig3: Immunohistochemical analysis of paraffin-embedded human liver tissue with Rabbit anti-ASGPR1 antibody (HA722500) at 1/4,000 dilution.

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 (HA722500) at 1/4,000 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.

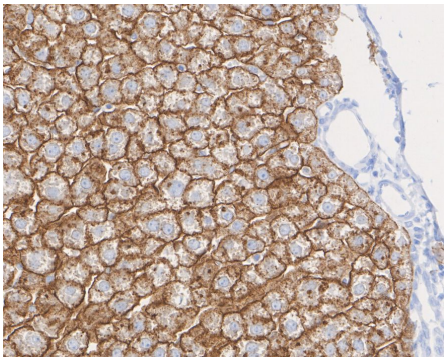

Fig4: Immunohistochemical analysis of paraffin-embedded rat liver tissue with Rabbit anti-ASGPR1 antibody (HA722500) at 1/4,000 dilution.

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 (HA722500) at 1/4,000 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.

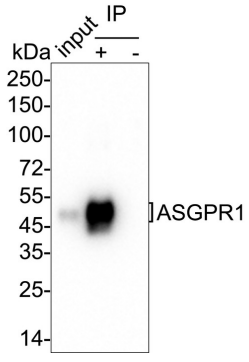

Fig5: ASGPR1 was immunoprecipitated from 0.2 mg HepG2 cell lysate with HA722500 at 2 µg/25 µl agarose. Western blot was performed from the immunoprecipitate using HA722500 at 1/1,000 dilution. Anti-Rabbit IgG for IP Nano-secondary antibody (NBI01H) at 1/5,000 dilution was used for 1 hour at room temperature.

Lane 1: HepG2 cell lysate (input)
Lane 2: HA722500 IP in HepG2 cell lysate
Lane 3: Rabbit IgG instead of HA722500 in HepG2 cell lysate

Blocking/Dilution buffer: 5% NFDM/TBST
Exposure time: 20 seconds; ECL: K1801

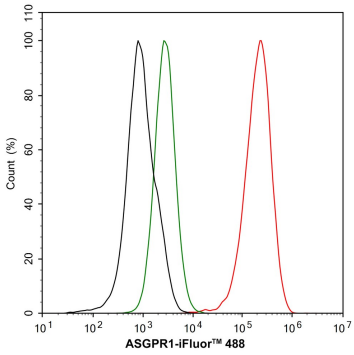

Fig6: Flow cytometric analysis of HepG2 cells labeling ASGPR1.

Cells were washed twice with cold PBS and resuspend. Then stained with the primary antibody (HA722500, 1μg/mL) (red) compared with Rabbit 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-Rabbit IgG Secondary antibody (HA1121) 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. Wang JQ et al. Inhibition of ASGR1 decreases lipid levels by promoting cholesterol excretion. Nature. 2022 Aug
2. Shi R et al. ASGR1 promotes liver injury in sepsis by modulating monocyte-to-macrophage differentiation via NF-kappaB/ATF5 pathway. Life Sci. 2023 Feb