

Anti-ABCE1 Antibody [JE35-87]

HA722330



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Cell, IHC-P, FC, IP
Molecular Wt:	Predicted band size: 67 kDa
Clone number:	JE35-87

Description: ATP-binding cassette sub-family E member 1 (ABCE1) also known as RNase L inhibitor (RLI) is an enzyme that in humans is encoded by the ABCE1 gene. ABCE1 is an ATPase that is a member of the ATP-binding cassette (ABC) transporters superfamily and OABP subfamily. ABCE1 inhibits the action of ribonuclease L. Ribonuclease L normally binds to 2-5A (5'-phosphorylated 2',5'-linked oligoadenylates) and inhibits the interferon-regulated 2-5A/RNase L pathway, which is used by viruses. ABCE1 heterodimerize with ribonuclease L and prevents its interaction with 2-5A, antagonizing the anti-viral properties of ribonuclease L, and allow the virus to synthesize viral proteins. It has also been implicated to have an effect in tumor cell proliferation and antiapoptosis. ABCE1 is an essential and highly conserved protein that is required for both eukaryotic translation initiation as well as ribosome biogenesis. The most studied homologues are Rli1p in yeast and Pixie in Drosophila.

Immunogen: Synthetic peptide within Human ABCE1 aa 550-599 / 599.

Positive control: HeLa cell lysate, Jurkat cell lysate, mouse pancreas tissue lysate, rat pancreas tissue lysate, K-562 cell lysate, NIH/3T3 cell lysate, PC-12 cell lysate, Jurkat, PC-12, mouse liver tissue, rat liver tissue.

Subcellular location: Cytoplasm, Mitochondrion.

Database links: SwissProt: P61221 Human | P61222 Mouse
Entrez Gene: 361390 Rat

Recommended Dilutions:

WB	1:1,000
IF-Cell	1:100
IHC-P	1:200
FC	1:1,000
IP	1-2µg/sample

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). Store at -20℃ long term.

Purity: Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

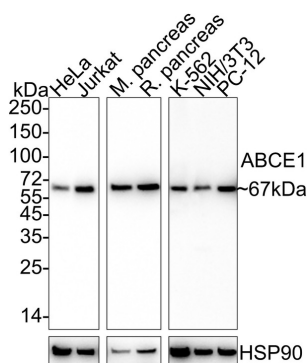
Service mail:support@huabio.cn

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

Images

Fig1: Western blot analysis of ABCE1 on different lysates with Rabbit anti-ABCE1 antibody (HA722330) at 1/1,000 dilution.



Lane 1: HeLa cell lysate (20 µg/Lane)
 Lane 2: Jurkat cell lysate (20 µg/Lane)
 Lane 3: Mouse pancreas tissue lysate (50 µg/Lane)
 Lane 4: Rat pancreas tissue lysate (50 µg/Lane)
 Lane 5: K-562 cell lysate (20 µg/Lane)
 Lane 6: NIH/3T3 cell lysate (20 µg/Lane)
 Lane 7: PC-12 cell lysate (20 µg/Lane)

Predicted band size: 67 kDa

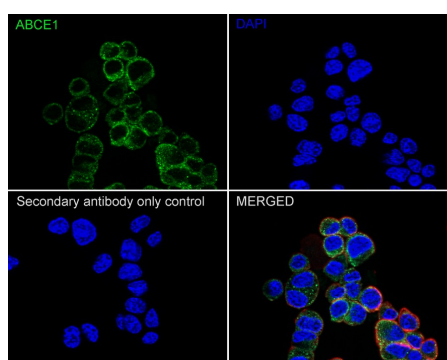
Observed band size: 67 kDa

Exposure time: Lane 1-4: 20 seconds; Lane 5-7: 1 minute 34 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 (HA722330) at 1/1,000 dilution was used in 5% NFDM/TBST at 4°C 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 Jurkat cells labeling ABCE1 with Rabbit anti-ABCE1 antibody (HA722330) 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-ABCE1 antibody (HA722330) at 1/100 dilution in 1% BSA in PBST overnight at 4 °C. 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°C. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

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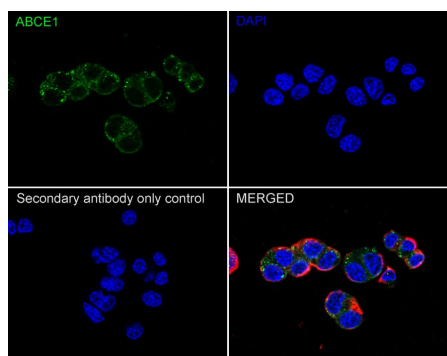
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Fig3: Immunocytochemistry analysis of PC-12 cells labeling ABCE1 with Rabbit anti-ABCE1 antibody (HA722330) at 1/100 dilution.



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-ABCE1 antibody (HA722330) at 1/100 dilution in 1% BSA in PBST overnight at 4 °C. 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°C. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

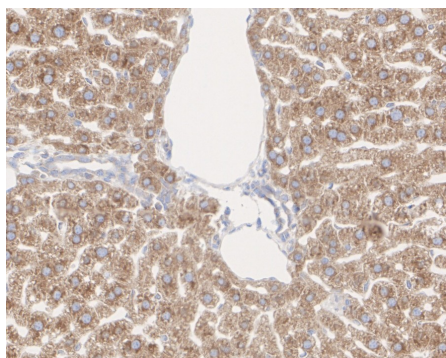


Fig4: Immunohistochemical analysis of paraffin-embedded mouse liver tissue with Rabbit anti-ABCE1 antibody (HA722330) at 1/200 dilution.

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 ddH₂O and PBS, and then probed with the primary antibody (HA722330) at 1/200 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.

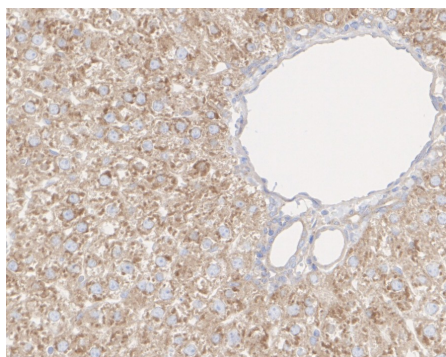


Fig5: Immunohistochemical analysis of paraffin-embedded rat liver tissue with Rabbit anti-ABCE1 antibody (HA722330) at 1/200 dilution.

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 ddH₂O and PBS, and then probed with the primary antibody (HA722330) at 1/200 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.

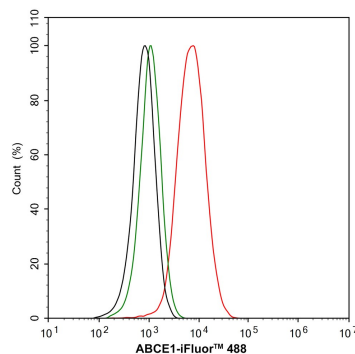


Fig6: Flow cytometric analysis of Jurkat cells labeling ABCE1.

Cells were fixed and permeabilized. Then stained with the primary antibody (HA722330, 1/1,000) (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).

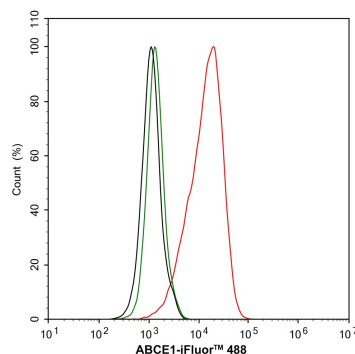


Fig7: Flow cytometric analysis of PC-12 cells labeling ABCE1.

Cells were fixed and permeabilized. Then stained with the primary antibody (HA722330, 1/1,000) (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).

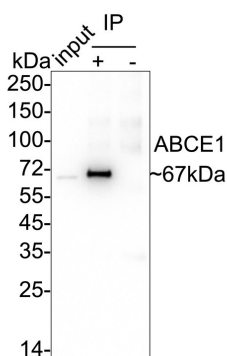


Fig8: ABCE1 was immunoprecipitated from 0.2 mg Jurkat cell lysate with HA722330 at 2 µg/10 µl beads. Western blot was performed from the immunoprecipitate using HA722330 at 1/1,000 dilution. Anti-Rabbit IgG for IP, AlpSdAbs® VHH(HRP) (025-100-005) at 1/5,000 dilution was used for 1 hour at room temperature.

Lane 1: Jurkat cell lysate (input)

Lane 2: HA722330 IP in Jurkat cell lysate

Lane 3: Rabbit IgG instead of HA722330 in Jurkat cell lysate

Blocking/Dilution buffer: 5% NFDM/TBST

Exposure time: 3 seconds; ECL: K1801

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Wada M et al. Human ABCE1 exhibits temperature-dependent heterologous co-functionality in *S. cerevisiae*. FEBS Open Bio. 2022 Oct
2. Ramnani B et al. ABCE1 Regulates RNase L-Induced Autophagy during Viral Infections. Viruses. 2021 Feb

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