# Anti-CD13 Antibody [PSH08-48]

## HA722994

| | |
|---|---|
| **Product Type:** | Recombinant Rabbit monoclonal IgG, primary antibodies |
| **Species reactivity:** | Human |
| **Applications:** | WB, IF-Cell, IHC-P, FC |
| **Molecular Wt:** | Predicted band size: 110 kDa |
| **Clone number:** | PSH08-48 |

**Description:** Aminopeptidase N is located in the small-intestinal and renal microvillar membrane, and also in other plasma membranes. In the small intestine aminopeptidase N plays a role in the final digestion of peptides generated from hydrolysis of proteins by gastric and pancreatic proteases. Its function in proximal tubular epithelial cells and other cell types is less clear. The large extracellular carboxyterminal domain contains a pentapeptide consensus sequence characteristic of members of the zinc-binding metalloproteinase superfamily. Sequence comparisons with known enzymes of this class showed that CD13 and aminopeptidase N are identical. The latter enzyme was thought to be involved in the metabolism of regulatory peptides by diverse cell types, including small intestinal and renal tubular epithelial cells, macrophages, granulocytes, and synaptic membranes from the CNS. Defects in this gene appear to be a cause of various types of leukemia or lymphoma. AAP is also used by some viruses as a receptor to which these viruses bind to and then enter cells. It is a receptor for human coronavirus 229E, feline coronavirus serotype II (FCoV-II), TGEV, PEDV, canine coronavirus genotype II (CCoV-II) as well as several Deltacoronaviruses.

| | |
|---|---|
| **Immunogen:** | Recombinant protein within human CD13 aa 33-967. |
| **Positive control:** | U-937 cell lysate, PANC-1 cell lysate, HL-60 cell lysate, PANC-1, human kidney tissue. |
| **Subcellular location:** | Cell membrane. |
| **Database links:** | SwissProt: P15144 Human |

**Recommended Dilutions:**

| | |
|---|---|
| **WB** | 1:5,000 |
| **IF-Cell** | 1:100 |
| **IHC-P** | 1:1,000 |
| **FC** | 1:1,000 |

| | |
|---|---|
| **Storage Buffer:** | PBS (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

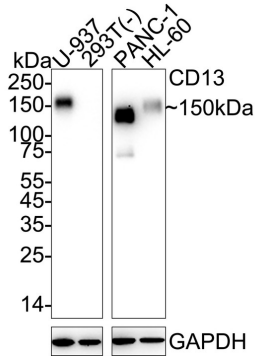


**Fig1:** Western blot analysis of CD13 on different lysates with Rabbit anti-CD13 antibody (HA722994) at 1/5,000 dilution.

Lane 1: U-937 cell lysate
Lane 2: 293T cell lysate (negative)
Lane 3: PANC-1 cell lysate
Lane 4: HL-60 cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 110 kDa
Observed band size: 150 kDa

Exposure time: Lane 1-2: 3 minutes; Lane 3-4: 20 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 (HA722994) at 1/5,000 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.

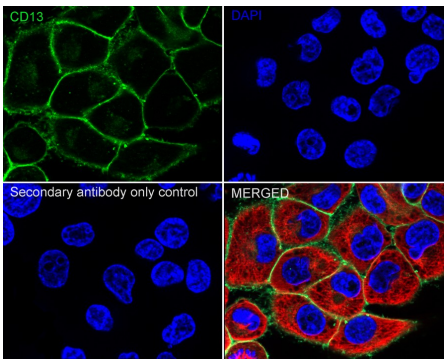


**Fig2:** Immunocytochemistry analysis of PANC-1 cells labeling CD13 with Rabbit anti-CD13 antibody (HA722994) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 15 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 15 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-CD13 antibody (HA722994) 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 (HA601187, 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.

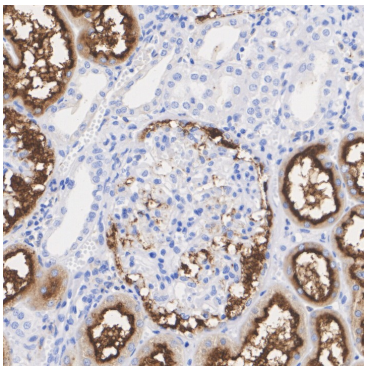

**Fig3:** Immunohistochemical analysis of paraffin-embedded human kidney tissue with Rabbit anti-CD13 antibody (HA722994) at 1/1,000 dilution.

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 dd$H_2O$ and PBS, and then probed with the primary antibody (HA722994) 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.

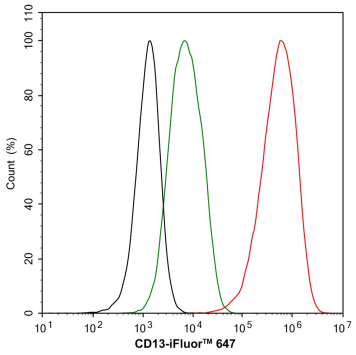


**Fig4:** Flow cytometric analysis of PANC-1 cells labeling CD13.

Cells were washed twice with cold PBS and resuspend. Then stained with the primary antibody (HA722994, 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™ 647 conjugate-Goat anti-Rabbit IgG Secondary antibody (HA1123) 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. Lu C et al. CD13/Aminopeptidase N Is a Potential Therapeutic Target for Inflammatory Disorders. J Immunol. 2020 Jan
2. Nguyen JN et al. CD13 facilitates immune cell migration and aggravates acute injury but promotes chronic post-stroke recovery. J Neuroinflammation. 2023 Oct