

# Anti-CD13 Antibody

## ER1803-74



<b>Product Type:</b>	Rabbit polyclonal IgG, primary antibodies
<b>Species reactivity:</b>	Human, Mouse, Rat
<b>Applications:</b>	WB, IF-Cell, IHC-P, FC
<b>Molecular Wt:</b>	Predicted band size: 110 kDa

**Description:** CD13, or aminopeptidase N, is a type II transmembrane glycoprotein that is expressed on most cells of Myeloid origin, including monocytes, basophils, eosinophils, neutrophils and Myeloid leukemias. CD13 is also found on certain epithelial cells, fibroblasts and osteoclasts. CD13 acts as a zinc-binding metalloprotease that plays a role in digestion and may function in the inactivation of some regulatory peptides such as enkephalins. CD13 may play a role in the invasion of cancer cells by enhancing their invasive capacity and metastatic behavior. The activity of CD13 can be inactivated using specific inhibitors that evoke apoptosis of CD13-positive cancer cells. Basic fibroblast growth factor (bFGF) expression upregulates CD13 expression in human melanoma cells by activating both the Myeloid and the epithelial CD13 promoter.

**Immunogen:** Recombinant protein within Human CD13 aa 273-448 / 967.

**Positive control:** Rat kidney tissue lysates, human liver tissue lysates, A549, HT-29, human kidney tissue.

**Subcellular location:** Cell membrane.

**Database links:** SwissProt: P15144 Human | P97449 Mouse | P15684 Rat

### Recommended Dilutions:

<b>WB</b>	1:500
<b>IF-Cell</b>	1:100-1:400
<b>IHC-P</b>	1:20,000
<b>FC</b>	1:50-1:100

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

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

**Purity:** Immunogen affinity purified.

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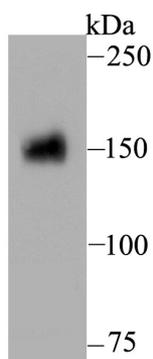
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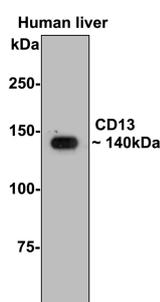
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## Images



**Fig1:** Western blot analysis of CD13 on rat kidney tissue lysate. Proteins were transferred to a PVDF membrane and blocked with 5% BSA in PBS for 1 hour at room temperature. The primary antibody was used at a 1/500 dilution in 5% BSA at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:5,000 dilution was used for 1 hour at room temperature.



**Fig2:** Western blot analysis of CD13 on human liver tissue lysate with Rabbit anti-CD13 antibody (ER1803-74) at 1/1,000 dilution.

Lysates/proteins at 10 µg/Lane.

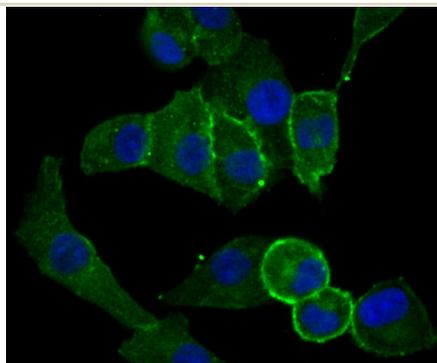
Predicted band size: 110 kDa

Observed band size: 140 kDa

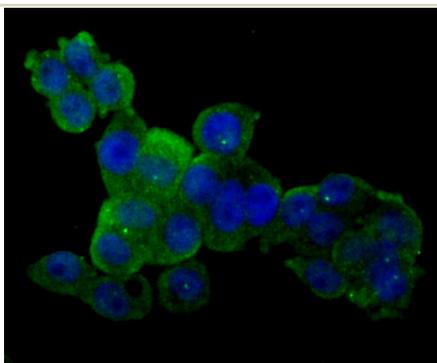
Exposure time: 2 minutes;

6% 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 (ER1803-74) 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 1:200,000 dilution was used for 1 hour at room temperature.



**Fig3:** ICC staining CD13 in A549 cells (green). Formalin fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 10 minutes at room temperature and blocked with 1% Blocker BSA for 15 minutes at room temperature. Cells were probed with CD13 polyclonal antibody at a dilution of 1:500 for 1 hour at room temperature, washed with PBS. Alexa Fluor™ 488 Goat anti-Rabbit IgG was used as the secondary antibody at 1/100 dilution. The nuclear counter stain is DAPI (blue).



**Fig4:** ICC staining CD13 in HT-29 cells (green). Formalin fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 10 minutes at room temperature and blocked with 1% Blocker BSA for 15 minutes at room temperature. Cells were probed with CD13 polyclonal antibody at a dilution of 1:200 for 1 hour at room temperature, washed with PBS. Alexa Fluor™ 488 Goat anti-Rabbit IgG was used as the secondary antibody at 1/100 dilution. The nuclear counter stain is DAPI (blue).

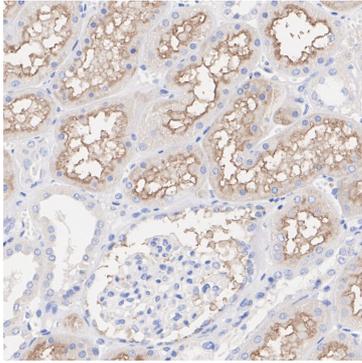
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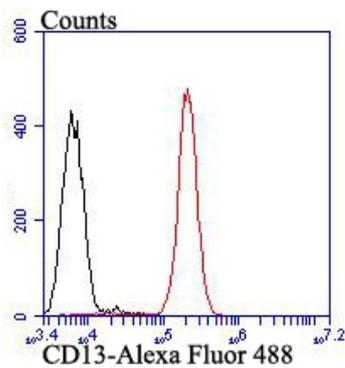
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**Fig5:** Immunohistochemical analysis of paraffin-embedded human kidney tissue with Rabbit anti-CD13 antibody (ER1803-74) at 1/20,000 dilution.

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<sub>2</sub>O and PBS, and then probed with the primary antibody (ER1803-74) at 1/20,000 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:** Flow cytometric analysis of CD13 was done on A549 cells. The cells were fixed, permeabilized and stained with CD13 antibody at 1/100 dilution (red) compared with an unlabelled control (cells without incubation with primary antibody; black). After incubation of the primary antibody on room temperature for an hour, the cells was stained with a Alexa Fluor™ 488-conjugated goat anti-rabbit IgG Secondary antibody at 1/500 dilution for 30 minutes.

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

### Background References

1. Cui SX et al. 13F-1, a novel 5-fluorouracil prodrug containing an Asn-Gly-Arg (NO<sub>2</sub>) COOCH<sub>3</sub> tripeptide, inhibits human colonic carcinoma growth by targeting Aminopeptidase N (APN/CD13). *Eur J Pharmacol* 734:50-9 (2014).
2. Hardtner C et al. High glucose activates the alternative ACE2/Ang-(1-7)/Mas and APN/Ang IV/IRAP RAS axes in pancreatic -cells. *Int J Mol Med* 32:795-804 (2013).

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