Anti-CD13 Antibody [SN71-04]

ET1611-61

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, IP
Molecular Wt:	Predicted band size: 110 kDa
Clone number:	SN71-04

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: Synthetic peptide within Human CD13 aa 401-450 / 967.

Positive control: PANC-1 cell lysate, mouse kidney tissue lysate, rat kidney tissue lysate, human tonsil tissue, human liver tissue, human breast tissue, human kidney tissue, mouse pancreas tissue.

Subcellular location: Cell membrane.

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

Recommended Dilutions:

WB	1:1,000-1:5,000
IHC-P	1:100-1:500
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). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

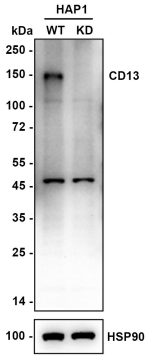

Fig1: Western blot analysis of CD13 on different lysates with Rabbit anti-CD13 antibody (ET1611-61) at 1/2,000 dilution.

Lane 1: HAP1-parental cell lysate
Lane 2: HAP1-CD13 KD cell lysate

Lysates/proteins at 10 µg/Lane.

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

Exposure time: 110 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 (ET1611-61) at 1/2,000 dilution was used in K1803 at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

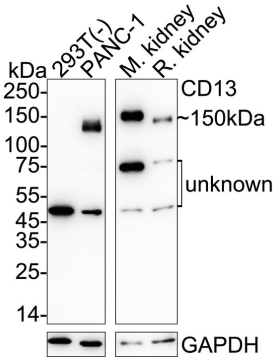

Fig2: Western blot analysis of CD13 on different lysates with Rabbit anti-CD13 antibody (ET1611-61) at 1/2,000 dilution.

Lane 1: 293T cell lysate (negative) (20 µg/Lane)
Lane 2: PANC-1 cell lysate (5 µg/Lane)
Lane 3: Mouse kidney tissue lysate (20 µg/Lane)
Lane 4: Rat kidney tissue lysate (20 µg/Lane)

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

Exposure time: 45 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 (ET1611-61) at 1/2,000 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.

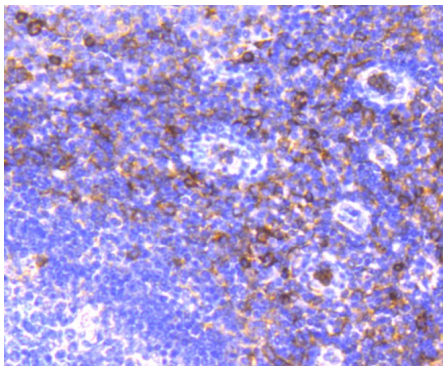

Fig3: Immunohistochemical analysis of paraffin-embedded human tonsil tissue using anti-CD13 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1611-61, 1/50) for 30 minutes 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.

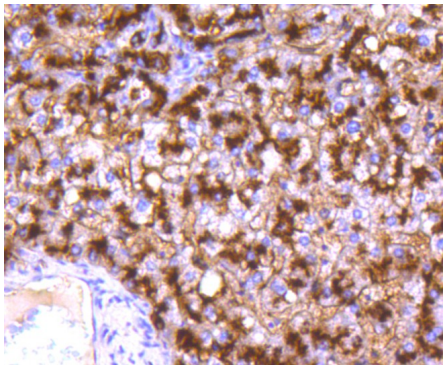

Fig4: Immunohistochemical analysis of paraffin-embedded human liver tissue using anti-CD13 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1611-61, 1/50) for 30 minutes 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.

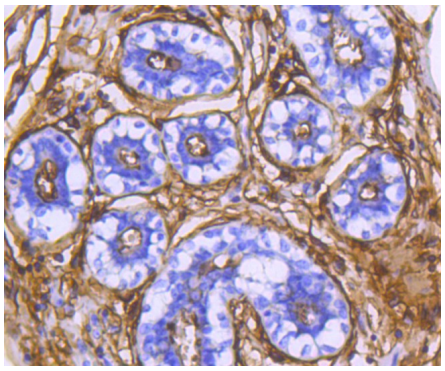

Fig5: Immunohistochemical analysis of paraffin-embedded human breast tissue using anti-CD13 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1611-61, 1/50) for 30 minutes 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.

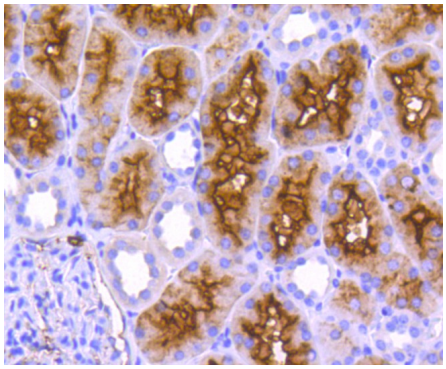

Fig6: Immunohistochemical analysis of paraffin-embedded human kidney tissue using anti-CD13 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1611-61, 1/50) for 30 minutes 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.

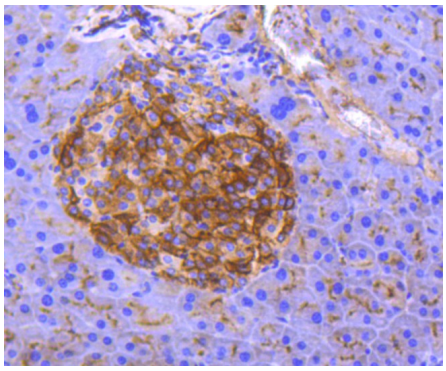

Fig7: Immunohistochemical analysis of paraffin-embedded mouse pancreas tissue using anti-CD13 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1611-61, 1/50) for 30 minutes 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.

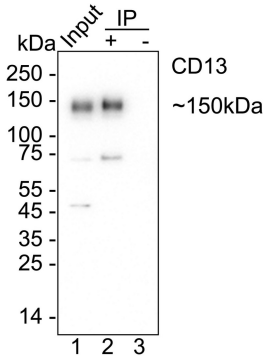

Fig8: CD13 was immunoprecipitated from 0.2 mg PANC-1 cell lysate with ET1611-61 at 2 µg/10 µl beads. Western blot was performed from the immunoprecipitate using ET1611-61 at 1/2,000 dilution. HRP Conjugated Anti-Rabbit IgG for IP Nano-secondary antibody at 1/5,000 dilution was used for 1 hour at room temperature.

Lane 1: PANC-1 cell lysate (input)
Lane 2: ET1611-61 IP in PANC-1 cell lysate
Lane 3: Rabbit IgG instead of ET1611-61 in PANC-1 cell lysate

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

Background References

1. Cui SX et al. 13F-1, a novel 5-fluorouracil prodrug containing an Asn-Gly-Arg (NO2) COOCH3 tripeptide, inhibits human colonic carcinoma growth by targeting Aminopeptidase N (APN/CD13). Eur J Pharmacol 734:50-9 (2014).
2. H rdtner 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).