

Anti-CD13/ANPEP Picoband® Antibody (monoclonal, 5B9)

Catalog Number: M02591-4

About ANPEP

Membrane alanyl aminopeptidase (EC 3.4.11.2) also known as alanyl aminopeptidase (AAP) or aminopeptidase N (AP-N) is an enzyme that in humans is encoded by the ANPEP gene. It is mapped to 15q26.1. 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. Human aminopeptidase N is a receptor for one strain of human coronavirus that is an important cause of upper respiratory tract infections. Defects in this gene appear to be a cause of various types of leukemia or lymphoma.

Overview

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| Product Name | Anti-CD13/ANPEP Picoband® Antibody (monoclonal, 5B9) |
| Reactive Species | Human, Monkey, Rat |
| Description | Boster Bio Anti-CD13/ANPEP Picoband® Antibody (monoclonal, 5B9) catalog # M02591-4. Tested in IHC, WB applications. This antibody reacts with Human, Monkey, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance. |
| Application | IHC, WB |
| Clonality | Monoclonal 5B9 |
| Formulation | Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4. |
| Storage Instructions | Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles. |
| Host | Mouse |
| Uniprot ID | P15144 |

Technical Details

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| Immunogen | E.coli-derived human CD13/ANPEP recombinant protein (Position: D148-S966). |
| Recommended Detection Systems | Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot, and HRP Conjugated anti-Mouse IgG Super Vision Assay Kit (SV0001-1) for IHC(P). |

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| Cross Reactivity | No cross-reactivity with other proteins. |
| Isotype | Mouse IgG2b |
| Form | Lyophilized |
| Concentration | Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml. |
| Purification | Immunogen affinity purified. |
| Suggested Dilutions | <p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>Western blot, 0.25-0.5ug/ml, Human, Rat, Monkey</p> <p>Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human, Rat</p> |

Anti-CD13/ANPEP Picoband® Antibody (monoclonal, 5B9) (M02591-4) Images

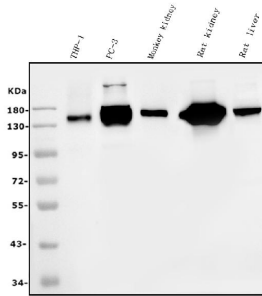


Figure 1. Western blot analysis of CD13/ANPEP using anti-CD13/ANPEP antibody (M02591-4). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: human THP-1 whole cell lysates,
Lane 2: human PC-3 whole cell lysates,
Lane 3: monkey kidney tissue lysates,
Lane 4: rat kidney tissue lysates,
Lane 5: rat liver tissue lysates.
After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-CD13/ANPEP antigen affinity purified monoclonal antibody (Catalog # M02591-4) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for CD13/ANPEP at approximately 150KD. The expected band size for CD13/ANPEP is at 150KD.

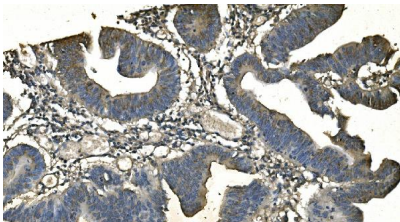


Figure 2. IHC analysis of CD13/ANPEP using anti-CD13/ANPEP antibody (M02591-4). CD13/ANPEP was detected in paraffin-embedded section of human rectal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml mouse anti-CD13/ANPEP Antibody (M02591-4) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

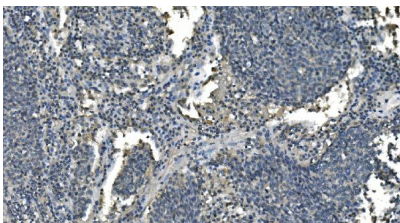


Figure 3. IHC analysis of CD13/ANPEP using anti-CD13/ANPEP antibody (M02591-4). CD13/ANPEP was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml mouse anti-CD13/ANPEP Antibody (M02591-4) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

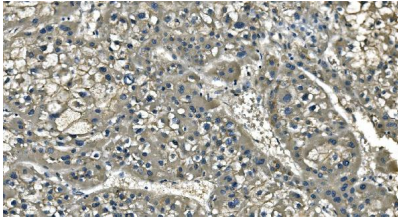


Figure 4. IHC analysis of CD13/ANPEP using anti-CD13/ANPEP antibody (M02591-4). CD13/ANPEP was detected in paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml mouse anti-CD13/ANPEP Antibody (M02591-4) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

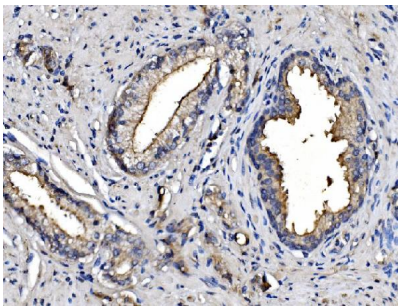


Figure 5. IHC analysis of CD13/ANPEP using anti-CD13/ANPEP antibody (M02591-4). CD13/ANPEP was detected in paraffin-embedded section of human prostate cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml mouse anti-CD13/ANPEP Antibody (M02591-4) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

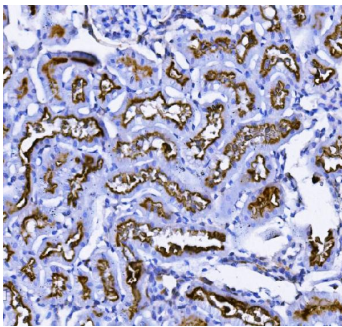


Figure 6. IHC analysis of CD13/ANPEP using anti-CD13/ANPEP antibody (M02591-4). CD13/ANPEP was detected in paraffin-embedded section of rat kidney tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml mouse anti-CD13/ANPEP Antibody (M02591-4) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

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