Human Aminopeptidase N/CD13 Antibody
Monoclonal Mouse IgG2A Clone # 498001
Catalog Number: MAB3815

**DESCRIPTION**

**Species Reactivity**  
Human

**Specificity**  
Detects human Aminopeptidase N/CD13 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant mouse Aminopeptidase N is observed.

**Source**  
Monoclonal Mouse IgG2A Clone # 498001

**Purification**  
Protein A or G purified from hybridoma culture supernatant

**Immunogen**  
Mouse myeloma cell line NS0-derived recombinant human Aminopeptidase N/CD13 Lys69-Lys967

**Accession #**  
AAA51719

**Formulation**  
Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

*Small pack size (SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

**APPLICATIONS**

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

<table>
<thead>
<tr>
<th>Recommended Concentration</th>
<th>Sample</th>
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<tbody>
<tr>
<td>Western Blot</td>
<td>2 µg/mL See Below</td>
</tr>
<tr>
<td>Immunocytochemistry</td>
<td>5-25 µg/mL See Below</td>
</tr>
<tr>
<td>Immunohistochemistry</td>
<td>1-25 µg/mL See Below</td>
</tr>
<tr>
<td>Simple Western</td>
<td>40 µg/mL See Below</td>
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</tbody>
</table>

**DATA**

**Western Blot**

Detection of Human Aminopeptidase N/CD13 by Western Blot. Western blot shows lysates of human kidney tissue and human prostate tissue. PVDF membrane was probed with 2 µg/mL of Mouse Anti-Human Aminopeptidase N/CD13 Monoclonal Antibody (Catalog # MAB3815) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for Aminopeptidase N/CD13 at approximately 150 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

**Immunocytochemistry**

Aminopeptidase N/CD13 in SH-SY5Y Human Cell Line. Aminopeptidase N/CD13 was detected in immersion fixed SH-SY5Y human neuroblastoma cell line using Mouse Anti-Human Aminopeptidase N/CD13 Monoclonal Antibody (Catalog # MAB3815) at 8 µg/mL, for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm and plasma membranes. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

**Immunohistochemistry**

Aminopeptidase N/CD13 in Human Liver Cancer Tissue. Aminopeptidase N/CD13 was detected in immersion fixed paraffin-embedded sections of human liver cancer tissue using 25 µg/mL Mouse Anti-Human Aminopeptidase N/CD13 Monoclonal Antibody (Catalog # MAB3815) overnight at 4 °C. Tissue was stained with the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

Aminopeptidase N/CD13 in Human Brain. Aminopeptidase N/CD13 was detected in immersion fixed paraffin-embedded sections of human brain (cortex) using Mouse Anti-Human Aminopeptidase N/CD13 Monoclonal Antibody (Catalog # MAB3815) at 1.7 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to blood vessels. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.
Detection of Human Aminopeptidase N/CD13 by Simple Western. Simple Western lane view shows lysates of human small intestine tissue and human prostate tissue, loaded at 0.5 mg/mL. A specific band was detected for Aminopeptidase N/CD13 at approximately 204 kDa (as indicated) using 40 µg/mL of Mouse Anti-Human Aminopeptidase N/CD13 Monoclonal Antibody (Catalog # MAB3815). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

**PREPARATION AND STORAGE**

**Reconstitution**
Reconstitute at 0.5 mg/mL in sterile PBS.

**Shipping**
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C

**Stability & Storage**
Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.

**BACKGROUND**
The human ANPEP gene encodes aminopeptidase N (APN), which is also known as microsomal aminopeptidase, alanyl aminopeptidase, aminopeptidase M, CD13, or membrane protein p161 (1-3). The deduced amino acid sequence of human APN consists of a short cytoplasmic tail (residues 2 to 8), a transmembrane region (residue 9 to 32), a Ser/Thr rich region and a zinc metalloprotease domain (residues 69 to 966). The amino acid sequence of human APN is 78% and 77% identical to that of rat and mouse, respectively. Widely expressed in many cells, tissues and species, APN cleaves the N-terminal amino acids from bioactive peptides, leading to their inactivation or degradation. The roles of APN in many fields, such as neuroscience, hematopoietic cells, immune system, angiogenesis, cancer and viral infection, have been reviewed (3).

**References:**