

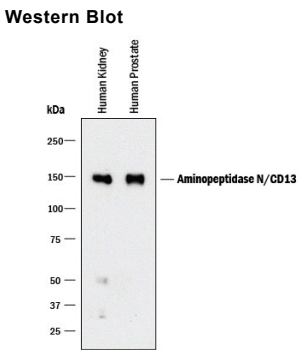
DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human Aminopeptidase N/CD13 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant mouse Aminopeptidase N is observed.
Source	Monoclonal Mouse IgG _{2A} Clone # 498001
Purification	Protein 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 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.

	Recommended Concentration	Sample
Western Blot	2 µg/mL	See Below
Immunocytochemistry	5-25 µg/mL	See Below
Immunohistochemistry	1-25 µg/mL	See Below

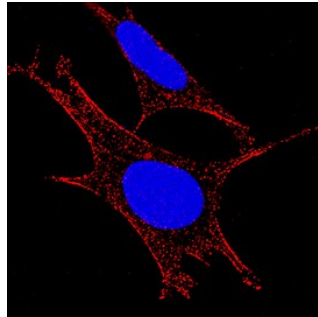
DATA

Western Blot



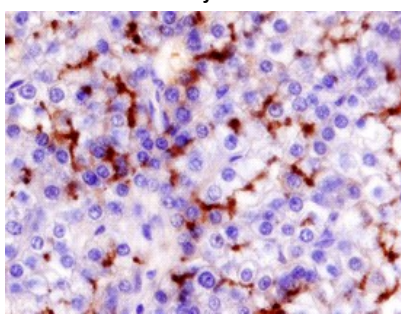
Detection of Human Aminopeptidase N/CD13 by Western Blot. Western blot shows lysates of human kidney tissue and human prostate tissue. PVDF membrane was probed with 2 µg/mL of Mouse Anti-Human Aminopeptidase N/CD13 Monoclonal Antibody (Catalog # MAB3815) followed by HRP-conjugated Anti-Mouse IgG Secondary 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



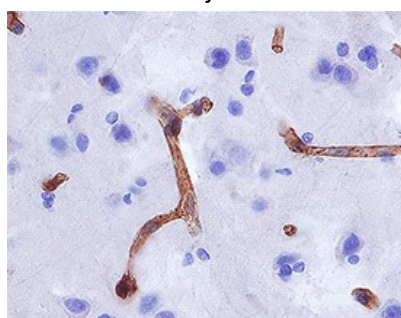
Aminopeptidase N/CD13 in SH-SY5Y Human Cell Line. Aminopeptidase N/CD13 was detected in immersion fixed SH-SY5Y human neuroblastoma cell line using Mouse Anti-Human Aminopeptidase N/CD13 Monoclonal Antibody (Catalog # MAB3815) at 8 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 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](#).

Immunohistochemistry



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](#).

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. <ul style="list-style-type: none">● 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:

1. Olsen, J. *et al.* (1988) FEBS Lett. **238**:307.
2. Look, A.T. *et al.* (1989) J. Clin. Invest. **83**:1299.
3. Turner, A.J. (2004) in *Handbook of Proteolytic Enzymes* (ed. Barrett, *et al.*) pp. 289, Academic Press, San Diego.