

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Aminopeptidase N/CD13 in the direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 20% cross-reactivity with recombinant mouse APN is observed.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human Aminopeptidase N/CD13 Lys69-Lys967 Accession # P15144
<b>Formulation</b>	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.

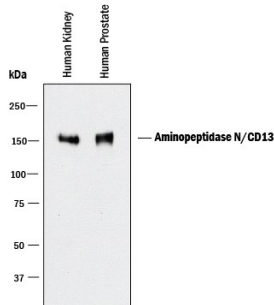
## APPLICATIONS

**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
<b>Western Blot</b>	0.5 µg/mL	See Below
<b>Flow Cytometry</b>	2.5 µg/10 <sup>6</sup> cells	See Below
<b>Immunohistochemistry</b>	0.3-15 µg/mL	See Below
<b>Immunoprecipitation</b>	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human Aminopeptidase N/CD13 (Catalog # 3815-ZN), see our available <a href="#">Western blot detection antibodies</a>
<b>CyTOF-ready</b>		Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.

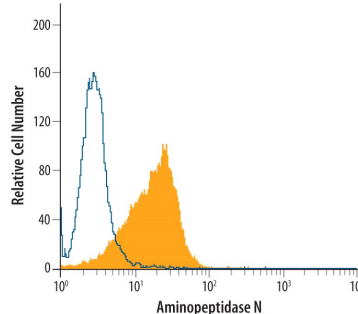
## DATA

### Western Blot



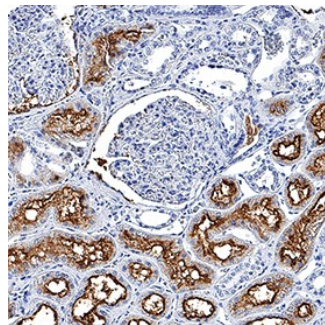
**Detection of Human Aminopeptidase N/CD13 by Western Blot.** Western blot shows lysates of human kidney tissue and human prostate tissue. PVDF membrane was probed with 0.5 µg/mL of Sheep Anti-Human Aminopeptidase N/CD13 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3815) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). 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](#).

### Flow Cytometry



**Detection of Aminopeptidase N/CD13 in U937 Human Cell Line by Flow Cytometry.** U937 human histiocytic lymphoma cell line was stained with Sheep Anti-Human Aminopeptidase N/CD13 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3815, filled histogram) or isotype control antibody (Catalog # 5-001-A, open histogram), followed by NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # NL010).

### Immunohistochemistry



**Aminopeptidase N/CD13 in Human Kidney.** Aminopeptidase N/CD13 was detected in immersion fixed paraffin-embedded sections of human kidney using Sheep Anti-Human Aminopeptidase N/CD13 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3815) at 0.3 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Specific staining was localized to convoluted tubules. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

## PREPARATION AND STORAGE

**Reconstitution** Reconstitute at 0.2 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). 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.