

DESCRIPTION

Species Reactivity	Human
Specificity	Detects Neprilysin/CD10 in ELISAs and Western blots. In sandwich ELISAs, approximately 20% cross-reactivity with recombinant mouse (rm) Neprilysin is observed and less than 0.3% cross-reactivity with recombinant human (rh) Neprilysin-2 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human Neprilysin/CD10 Tyr52-Trp750 Accession # P08473
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

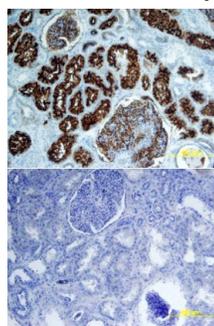
APPLICATIONS

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	0.1 µg/mL	Recombinant Human Neprilysin/CD10 (Catalog # 1182-ZNC)
Flow Cytometry	2.5 µg/10 ⁶ cells	CD19 ⁺ human peripheral blood lymphocytes
Immunohistochemistry	5-15 µg/mL	See Below
Human Neprilysin/CD10 Sandwich Immunoassay		Reagent
ELISA Capture	0.2-0.8 µg/mL	Human Neprilysin/CD10 Antibody (Catalog # AF1182)
ELISA Detection	0.1-0.4 µg/mL	Human Neprilysin/CD10 Biotinylated Antibody (Catalog # BAF1182)
Standard		Recombinant Human Neprilysin/CD10 (Catalog # 1182-ZNC)

DATA

Immunohistochemistry



Neprilysin/CD10 in Human Kidney. Neprilysin/CD10 was detected in immersion fixed paraffin-embedded sections of human kidney array using Goat Anti-Human Neprilysin/CD10 Biotinylated Antigen Affinity-purified Polyclonal Antibody (Catalog # BAF1182) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. 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.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <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

Neprilysin/CD10, also known as NEP and neutral endopeptidase 24.11, is a zinc metallopeptidase expressed at the cell surface of a variety of cells. The enzyme functions both as an endopeptidase with a thermolysin-like specificity and as a dipeptidylcarboxypeptidase. NEP has been shown to be involved in the degradation of enkephalins in the mammalian brain and the inactivation of circulating atrial natriuretic peptide (1, 2). NEP has also been identified as the common acute lymphocytic leukemia antigen (CALLA), and is expressed on the surface of lymphocytes in some disease states (3, 4). These and other observations have resulted in considerable interest in NEP as a target for analgesics and antihypertensive drugs. NEP is also a major degrading enzyme of amyloid β peptide (Aβ) in the brain, indicating that down-regulation of NEP activity, which could be caused by aging, can contribute to the development of Alzheimer's disease by promoting Aβ accumulation (5).

References:

1. Malfroy, B. *et al.* (1978) *Nature* **276**:523.
2. Kenny, A.J. and Stephenson, S.L. (1988) *FEBS Lett.* **232**:1.
3. LeTarte, M. *et al.* (1988) *J. Exp. Med.* **168**:1247.
4. Shipp, M.A. *et al.* (1988) *Proc. Natl. Acad. Sci. USA* **85**:4819.
5. Itwata, N. *et al.* (2001) *Science* **292**:1550.