

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Neprilysin/CD10 in ELISAs and Western blots. In sandwich immunoassays, less than 35% cross-reactivity with recombinant human (rh) Neprilysin is observed and less than 0.2% cross-reactivity with rhNeprilysin-2 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant mouse Neprilysin/CD10 Tyr52-Trp750 Accession # AAA37386
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.

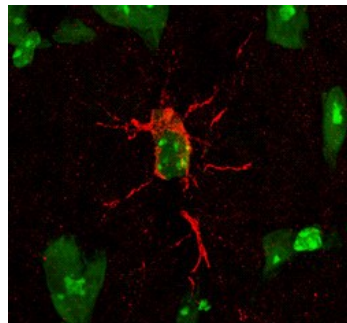
APPLICATIONS

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	0.1 µg/mL	Recombinant Mouse Neprilysin/CD10 (Catalog # 1126-ZN)
Immunohistochemistry	5-15 µg/mL	See Below
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Mouse Neprilysin/CD10 (Catalog # 1126-ZN), see our available Western blot detection antibodies
Mouse Neprilysin/CD10 Sandwich Immunoassay		Reagent
ELISA Capture	0.2-0.8 µg/mL	Mouse Neprilysin/CD10 Antibody (Catalog # AF1126)
ELISA Detection	0.1-0.4 µg/mL	Mouse Neprilysin/CD10 Biotinylated Antibody (Catalog # BAF1126)
Standard		Recombinant Mouse Neprilysin/CD10 (Catalog # 1126-ZN)
Neutralization	Measured by its ability to neutralize Recombinant Mouse Neprilysin/CD10 (0.1 µg/mL, Catalog # 1126-ZN) cleavage of the fluorogenic peptide substrate Mca-RPPGFSAFK(Dnp)-OH (10 µM, Catalog # ES005). The Neutralization Dose (ND ₅₀) is typically 1.3 µg/mL.	

DATA

Immunohistochemistry



Neprilysin/CD10 in Mouse Brain.
Neprilysin/CD10 was detected in perfusion fixed frozen sections of mouse brain (glial cell in hippocampus) using 15 µg/mL Goat Anti-Mouse Neprilysin/CD10 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1126) overnight at 4 °C. Tissue was stained (red) and counterstained (green). View our protocol for [Fluorescent IHC Staining of Frozen 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. <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 (NEP, neutral endopeptidase 24.11, EC 3.4.24.11) 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 lymphoblastic leukemia antigen (CALLA), and to be expressed on the surface of lymphocytes in some disease states (3). These and other observations have resulted in considerable clinical interest in NEP as a potential target for analgesics and antihypertensive drugs. NEP is also a major degrading enzyme of amyloid β peptide ($A\beta$) 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 $A\beta$ accumulation (4).

References:

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