

Neprilysin/CD10 Protein, Rat (HEK293, His)

Cat. No.:	HY-P73746
Synonyms:	Neprilysin; CALLA; NEP; SFE; CD10; MME
Species:	Rat
Source:	HEK293
Accession:	P07861 (Y52-W750)
Gene ID:	24590
Molecular Weight:	Approximately 90-95 kDa

PROPERTIES

AA Sequence

YDDGICKSSD	CIKSAARLIQ	NMDASAEPCT	DDFKYACGGW
LKRNVIPETS	SRYSNFDILR	DELEVILKDV	LQEPKTEDIV
AVQKAKTLR	SCINESAIDS	RGGQPLLTLL	PDIYGWVPAS
QNWEQTYGTS	WTAEKSLAQL	NSKYGKKVLI	NFFVGTDDKN
STQHIHFHQ	PRLGLPSRDY	YEECTGIYKEA	CTAYVDFMIS
VARLIRQEQR	LPIDENQLSL	EMNKVMELEK	EIANATTKPE
DRNDPMLLYN	KMTLAKLQNN	FSLEINGKPF	SWSNFTNEIM
STVNINIQNE	EEVVVYAPEY	LTKLKPILTK	YSPRDLQNLN
SWRFIMDLVS	SLSRNYKESR	NAFRKALYGT	TSETATWRRC
ANYVNGNMEN	AVGRLYVEAA	FAGESKHVVE	DLIAQIREVF
IQTLLDGLTWM	DAETKKKAAE	KALAIKERIG	YPDDIISNEN
KLNNLEYLELN	YKEEYFENI	IQNLKFSQSK	QLKKLREKVD
KDEWISGAAV	VNAFYSSGRN	QIVFPAGILQ	PPFFSARQSN
SLNYGGIGMV	IGHEITHGFD	DNGRNFNKDG	DLVDWWTQQS
ANNFKDQSQC	MVYQYGNFTW	DLAGGQHLLG	INTLGENIAD
NGGIGQAYRA	YQNYVKKNGE	EKLLPGLDLN	HKQLFFLNFA
QVWCGTYRPE	YAVNSIKTDV	HSPGNFRIG	TLQNSAEFAD
AFHCRKNSYM	NPERKCRVW		

Biological Activity

Measured by its ability to cleave a peptide substrate, Mca-(ala⁷,lys(dnp)⁹)-bradykinin. Read at excitation and emission wavelengths of 320 nm and 405 nm (top read). The specific activity is 12527.20 pmol/min/μg, as measured under the described conditions.

Appearance

Lyophilized powder

Formulation

Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.

Endotoxin Level

<1 EU/μg, determined by LAL method.

Reconstitution

It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH₂O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).

Storage & Stability

Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.

Shipping

Room temperature in continental US; may vary elsewhere.

DESCRIPTION**Background**

The Neprilysin/CD10 Protein exhibits a thermolysin-like specificity but is primarily active on polypeptides of up to 30 amino acids. Biologically significant, it plays a crucial role in the degradation of opioid peptides, including Met- and Leu-enkephalins, achieved through the cleavage of a Gly-Phe bond. Additionally, Neprilysin/CD10 catalyzes the cleavage of bradykinin, substance P, and neurotensin peptides, and it can cleave angiotensin-1, angiotensin-2, and angiotensin 1-9. The protein is implicated in the degradation of the atrial natriuretic factor (ANF) and exhibits UV-inducible elastase activity towards skin preelastic and elastic fibers, highlighting its diverse enzymatic functions (By similarity).

Caution: Product has not been fully validated for medical applications. For research use only.

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