Catalog No. LF-MA0203

MONOCLONAL ANTIBODY

Anti-Carboxypeptidase N subunit 2 precursor (36A1)

Background : Human carboxypeptidase N (CPN) [(EC) 3.4.17.3], a member of the CPN/E subfamily of "regulatory" metallo-carboxypeptidases, is a zinc metalloprotease, which cleaves basic amino acids, lysine and arginine, from the carboxy-terminus of biologically active peptides and proteins.
CPN is an extracellular glycoprotein synthesized in the liver and secreted into the blood, where it controls the activity of vasoactive peptide hormones, growth factors and cytokines by specifically removing C-terminal basic residues.
Human CPN was discovered as an enzyme that inactivates bradykinin by cleaving its carboxy-terminal arginine and was also referred to as kininase I.
CPN is a major inactivator of anaphylatoxins C3a, C4a and C5a and also cleaves off C-terminal Lys residues from larger protein substrates, such as the M and B subunits of creatine kinase, released from the heart after myocardial infarction.
CPN is a tetramer (280 kDa) comprised of two heterodimers each
consisting of a catalytic CPN1(48 – 55 kDa) and non-catalytic CPN2 (83kDa) subunit.The CPN2 subunit keeps the smaller catalytic subunit in the circulation and protects it against inactivation at 37 °C. The CPN2 subunit may also promote the cleavage of higher molecular mass plasma protein substrates by the catalytic CPN1 subunit.
The most conserved region of the carboxypeptidase proteins is the active site. All mammalian carboxypeptidases contain a zinc binding site, a substrate binding site, an amino acid involved in peptide specificity, and an amino acid involved in catalytic activity of the protein.
Patients with reduced CPN level present chronic recurrent angioedema, which is unrelated to diet or environment.

Immunogen: Protein purified from Human plasma

Clone number : 36A1 **Host :** Mouse

Size : 100 µℓ **Isotype :** IgG1, k

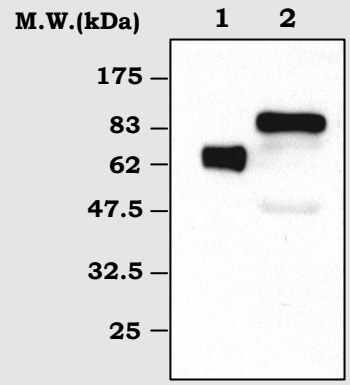
Compositon : Hepes with 0.15M NaCl, 0.01% BSA, 0.03% sodium azide, and 50% glycerol

Positive control : Human plasma

Storage : Store for 1 year at –20℃ from date of shipment

Species cross reactivity

Human	Mouse	Rat
+	NT	NT



Immunoblot Analysis of human plasma protein
Lane 1 : carboxypeptidase N subunit 2 precursor protein isolated from human plasma
Lane 2 : Human plasma *(0.3ul)*

Applications :
ELISA
Western blotting (1: 2,000)

Background Reference :

1. Keil C. et al., 2007, J Mol Biol. 2007 Feb 16;366(2):504-16.
2. Matthews KW, Mueller-Ortiz SL. and Wetsel RA., 2004, Mol Immunol. 40(11):785-793.

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