

## Carnosine Dipeptidase 1/CNDP1 Protein, Human (HEK293, His)

<b>Cat. No.:</b>	HY-P7740
<b>Synonyms:</b>	rHuCarnosine Dipeptidase 1, His; Beta-Ala-His Dipeptidase; CNDP Dipeptidase 1; Carnosine Dipeptidase 1; Glutamate Carboxypeptidase-Like Protein 2; Serum Carnosinase; CNDP1; CN1; CPGL2
<b>Species:</b>	Human
<b>Source:</b>	HEK293
<b>Accession:</b>	Q96KN2 (S27-L506)
<b>Gene ID:</b>	84735
<b>Molecular Weight:</b>	60-90 kDa

### PROPERTIES

<b>AA Sequence</b>	<pre> S P S P P P A L L E   K V F Q Y I D L H Q   D E F V Q T L K E W   V A I E S D S V Q P V P R F R Q E L F R   M M A V A A D T L Q   R L G A R V A S V D   M G P Q Q L P D G Q S L P I P P I I L A   E L G S D P T K G T   V C F Y G H L D V Q   P A D R G D G W L T D P Y V L T E V D G   K L Y G R G A T D N   K G P V L A W I N A   V S A F R A L E Q D L P V N I K F I I E   G M E E A G S V A L   E E L V E K E K D R   F F S G V D Y I V I S D N L W I S Q R K   P A I T Y G T R G N   S Y F M V E V K C R   D Q D F H S G T F G G I L H E P M A D L   V A L L G S L V D S   S G H I L V P G I Y   D E V V P L T E E E I N T Y K A I H L D   L E E Y R N S S R V   E K F L F D T K E E   I L M H L W R Y P S L S I H G I E G A F   D E P G T K T V I P   G R V I G K F S I R   L V P H M N V S A V E K Q V T R H L E D   V F S K R N S S N K   M V V S M T L G L H   P W I A N I D D T Q Y L A A K R A I R T   V F G T E P D M I R   D G S T I P I A K M   F Q E I V H K S V V L I P L G A V D D G   E H S Q N E K I N R   W N Y I E G T K L F   A A F F L E M A Q L H H H H H H H           </pre>
<b>Biological Activity</b>	Measured by its ability to cleave carnosine (beta -Ala-L-His) in a two-step assay. The specific activity is 186.51 pmol/min/μg, as measured under the described conditions.
<b>Appearance</b>	Solution
<b>Formulation</b>	Supplied as a 0.2 μm filter solution of 20 mM Tris-HCl, 150 mM NaCl, pH 7.5.
<b>Endotoxin Level</b>	<1 EU/μg, determined by LAL method.
<b>Reconstitution</b>	N/A
<b>Storage &amp; Stability</b>	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
<b>Shipping</b>	Shipping with dry ice

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## DESCRIPTION

### Background

Carnosine Dipeptidase 1 (CNDP1) is a member of the M20 metalloprotease family, a 57 kDa protein encoded by the CNDP1 gene. In humans, CNDP1 is secreted from the liver into the serum. In other mammals, CNDP1 is expressed exclusively within the kidney and lacks a signal peptide<sup>[1]</sup>.

The function of CNDP1 is not fully defined, but it displays carboxy- and dipeptidase activity and its main substrates appear to be the dipeptides carnosine ( $\beta$ -alanyl-histidine) and homocarnosine ( $\gamma$ -aminobutyryl-L-histidine). Furthermore, this protein is shown to be reduced in metastatic prostate cancer and glioblastoma<sup>[1][2]</sup>.

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## REFERENCES

- [1]. Michael Teufel, et al. Sequence identification and characterization of human carnosinase and a closely related non-specific dipeptidase. *J Biol Chem*
- [2]. Peter Arner, et al. Circulating carnosine dipeptidase 1 associates with weight loss and poor prognosis in gastrointestinal cancer. *PLoS One*. 2015 Apr 21;10(4):e0123566.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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