

# Recombinant Human CNDP1 Protein (His Tag)

Catalog Number:PKSH031891



**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

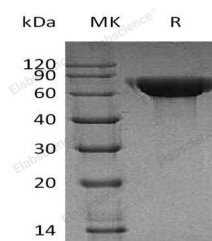
## Description

<b>Synonyms</b>	Beta-Ala-His Dipeptidase;CNDP Dipeptidase 1;Carnosine Dipeptidase 1;Glutamate Carboxypeptidase-Like Protein 2;Serum Carnosinase;CNDP1;CN1;CPGL2;HsT2308
<b>Species</b>	Human
<b>Expression Host</b>	HEK293 Cells
<b>Sequence</b>	Ser27-His507
<b>Accession</b>	NP_116038.4
<b>Calculated Molecular Weight</b>	55.3 kDa
<b>Observed molecular weight</b>	60-65 kDa
<b>Tag</b>	C-His
<b>Bioactivity</b>	Measured by its ability to cleave carnosine ( $\beta$ AlaLHis) in a twostep assay. The specific activity is > 250 pmoles/min/ $\mu$ g.

## Properties

<b>Purity</b>	> 90 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per $\mu$ g of the protein as determined by the LAL method.
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from sterile PBS, pH 7.4 Normally 5 % - 8 % trehalose, mannitol and 0.01 % Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

## Data



> 90 % as determined by reducing SDS-PAGE.

## Background

CNDP1; also known as carnosine dipeptidase 1; glutamate carboxypeptidase-like protein 2 (CPGL-2) or carnosinase 1 (CN1); is a member of the M20 metalloprotease family. The CNDP1 gene contains trinucleotide (CTG) repeat length polymorphism in the coding region; which has been demonstrated to be associated with susceptibility to developing diabetic nephropathy; for carnosine protection against the adverse effects of high glucose levels on renal cells. In humans;

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CNDP1 is secreted from the liver into the serum. In other mammals; including rodents; CNDP1 is expressed exclusively within the kidney and lacks a signal peptide. CNDP1 protein is a secreted homodimeric dipeptidase that specifically hydrolyzes L-carnosine ( $\beta$ -alanyl-L-histidine); and is identified as human carnosinase expressed in the brain. CNDP1 has been associated with diabetic nephropathy in Europeans and European Americans; but not African-Americans. It was identified and confirmed as a risk factor; were cross-sectional and mostly in patients with type 2 diabetes. The polymorphisms of CNDP1 can be excluded as a risk factor for nephropathy in type 1 diabetes. In addition; CNDP1 is also suggested to be implicated in the actions of neuroprotection and neurotransmiting.

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