

# Recombinant Mouse CNDP1 Protein (His Tag)

Catalog Number:PKSM040417



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

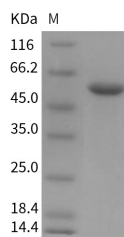
## Description

<b>Synonyms</b>	AI746433;Cn1
<b>Species</b>	Mouse
<b>Expression Host</b>	HEK293 Cells
<b>Sequence</b>	Met 1-Tyr 492
<b>Accession</b>	Q8BUG2
<b>Calculated Molecular Weight</b>	56.5 kDa
<b>Observed molecular weight</b>	55 kDa
<b>Tag</b>	C-His
<b>Bioactivity</b>	Measured by its ability to cleave carnosine ( $\beta$ -Ala-L-His) in a two-step assay. The specific activity is $> 250$ pmoles/min/ $\mu$ g.

## Properties

<b>Purity</b>	$> 93$ % 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 $-80^{\circ}\text{C}$ . Reconstituted protein solution can be stored at $4-8^{\circ}\text{C}$ for 2-7 days. Aliquots of reconstituted samples are stable at $< -20^{\circ}\text{C}$ 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



$> 93$  % 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, 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

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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 neurotransmitting.

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