Recombinant human Carnosine Dipeptidase 1/CNDP1 protein

Catalog Number: ATGP3503

PRODUCT INFORMATION

Expression system
Baculovirus

Domain
27-507aa

UniProt No.
Q96KN2

NCBI Accession No.
NP_116038.4

Alternative Names
Beta-Ala-His dipeptidase, CNDP dipeptidase 1, Carnosine dipeptidase 1, Glutamate carboxypeptidase-like protein 2, Serum carnosinase, CN1, CPGL2, Carnosinase 1

PRODUCT SPECIFICATION

Molecular Weight
54.9 kDa (489aa)

Concentration
0.25mg/ml (determined by absorbance at 280nm)

Formulation
Liquid in. Phosphate-Buffered Saline (pH 7.4) containing 10% glycerol

Purity
> 95% by SDS-PAGE

Endotoxin level
< 1 EU per 1ug of protein (determined by LAL method)

Biological Activity
Specific activity is >3,000pmol/min/ug, and as measured by the hydrolysis of carnosine per minute at pH6.8 at 25C.

Tag
His-Tag

Application
SDS-PAGE, Enzyme Activity

Storage Condition
Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

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BACKGROUND

Description

CNDP1, also known as beta-Ala-His dipeptidase, belongs to the peptidase M20A family. The shortest allelic form (CNDP1 Mannheim) was more common in the absence of nephropathy and was associated with lower serum carnosinase levels. Carnosine inhibited the increased production of fibronectin and collagen type VI in podocytes and the increased production of TGF-beta in mesangial cells. Diabetic patients with the CNDP1 Mannheim variant are less susceptible for nephropathy. Carnosine protects against the adverse effects of high glucose levels on renal cells. Recombinant human CNDP1, fused to His-tag at C-terminus, was expressed in insect cell and purified by using conventional chromatography techniques.

Amino acid Sequence

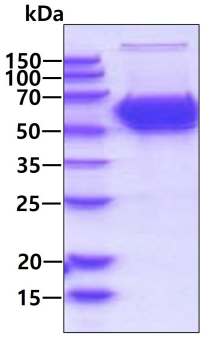
SPSPPPALLE KVFQYIDLHQ DEFVQTLKEW VAIESDSVQP VPRFRQELFR MMAVAADTLQ RLGARVASVD MGPQQLPDGQ SLPIPPVILA ELGSDPTKGT VCFYGHLDVQ PADRGDGWLT DPYVLTEVDG KLYGRGATDN KGPVLAWINA VSAFRALEQD LPVNIKFIIE GMEEAGSVAL EELVEKEKDR FFSGVDYIVI SDNLWISQRK PAITYGTRGN SYFMVEVKCR DQDFHSGTFG GILHEPMADL VALLGSLVDS SGHILVPGIY DEVVPLTEEE INTYKAIHLD LEEYRNSSRV EKFLFDTKEE ILMHLWRYPS LSIHGIEGAF DEPGTKTVIP GRVIGKFSIR LVPHMNVSAV EKQVTRHLED VFSKRNSSNK MVVSMTLGLH PWIANIDDTQ YLAAKRAIRT VFGTEPDMIR DGSTIPIAKM FQEIVHKSVV LIPLGAVDDG EHSQNEKINR WNYIEGTKLF AAFFLEMAQL H<LEHHHHHH>

General References

Kurashige M., et al. (2013) PLoS ONE 8(1):E54064.
Ahluwalia TS., et al. (2011) Diabetologia 54(9):2295-2302.

DATA

SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.