

CNDP2 Protein, Human, Recombinant (His)

General Information

Synonyms:	CNDP dipeptidase 2 (metallopeptidase M20 family);CPGL;HEL-S-13;PEPA;HsT2298;CN2
Protein Construction:	A DNA sequence encoding the human CNDP2 (CAC69883.1) (Met 1-Asp 475) was expressed, fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Met 1
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	CAC69883.1
Molecular Weight:	54.2 kDa (predicted); 54.2 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 94 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 50 mM Tris, 100 mM NaCl, 0.5 mM PMSF, pH 8.0. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:
It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:
In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Cytosolic non-specific dipeptidase, also known as CNDP dipeptidase 2, Glutamate carboxypeptidase-like protein 1, Peptidase A, CNDP2 and CN2, is a cytoplasm protein which belongs to the peptidase M2A family. CNDP2 / CPGL is a cytosolic enzyme that can hydrolyze carnosine to yield l-histidine and beta-alanine. CNDP2 / CPGL hydrolyzes a variety of dipeptides including L-carnosine but has a strong preference for Cys-Gly. It may play a role as tumor suppressor in hepatocellular carcinoma (HCC) cells. Isoform1 of CNDP2 / CPGL is ubiquitously expressed

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with higher levels in kidney and liver (at protein level). Isoform2 of CNDP2 / CPGL is expressed in fetal tissues, it is only expressed in adult liver and placental tissues. CNDP2 / CPGL is highly expressed in the histaminergic neurons in the tuberomammillary nucleus, implying that it may supply histidine to histaminergic neurons for histamine synthesis.

Reference

Bakker,SJ. et al., 2008, Diabetes 57 (12):e16; author reply e17.

Wanic, K. et al., 2008, Diabetes 57 (9): 2547-51.

McDonough,CW. et al., 2009, Hum Genet 126 (2): 265-75.

Kaur,H. et al., 2009, J Biol Chem. 284 (21):14493-502.

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481