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CNDP2 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP17117b

Product Information

Application	WB, E
Primary Accession	Q96KP4
Other Accession	NP_060705.2, NP_001161971.1
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB37241
Calculated MW	52878
Antigen Region	348-375

Additional Information

Gene ID	55748
Other Names	Cytosolic non-specific dipeptidase, CNDP dipeptidase 2, Glutamate carboxypeptidase-like protein 1, Peptidase A, CNDP2, CN2, CPGL, PEPA
Target/Specificity	This CNDP2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 348-375 amino acids from the C-terminal region of human CNDP2.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CNDP2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CNDP2 {ECO:0000303|PubMed:25964343, ECO:0000312|HGNC:HGNC:24437}
Function	Cytosolic metallodipeptidase with broad substrate specificity that catalyzes

	the hydrolysis of amide bonds in dipeptides and pseudopeptides (PubMed:12473676, PubMed:19346245, PubMed:25964343). Substrates include L-cysteinylglycine, an intermediate metabolite of the gamma-glutamyl cycle of glutathione metabolism (PubMed:19346245, PubMed:25964343). Can also hydrolyze threonyl-containing dipeptides (By similarity). Upon physiological conditions of amino acids and lactate excess can also catalyze a reverse proteolysis reaction, generating N- [(S)-lactoyl]-L-phenylalanine and possibly other N-lactoyl-amino acids which it can also hydrolyze in vitro. N-[(S)-lactoyl]-L-phenylalanine is an exercise-induced metabolite that influences food intake and systemic energy balance (PubMed:25964343). Carnosine is probably not a physiological substrate and L-homocarnosine is not a substrate for this enzyme (PubMed:12473676). Plays a role in the regulation of cell cycle arrest and apoptosis (PubMed:17121880, PubMed:24395568).
Cellular Location	Cytoplasm, cytosol
Tissue Location	[Isoform 1]: Ubiquitously expressed with higher levels in kidney and liver (at protein level). Expressed in peripheral blood leukocytes (PubMed:12473676). Expressed in gastric mucosa and down-regulated in gastric cancer mucosal tissues (at protein level) (PubMed:24395568).

Background

CNDP2, also known as tissue carnosinase and peptidase A (EC 3.4.13.18), is a nonspecific dipeptidase rather than a selective carnosinase (Teufel et al., 2003 [PubMed 12473676]).

References

Ahmed, A.H., et al. Biochemistry 49(13):2843-2850(2010)
McDonough, C.W., et al. Hum. Genet. 126(2):265-275(2009)
Wanic, K., et al. Diabetes 57(9):2547-2551(2008)
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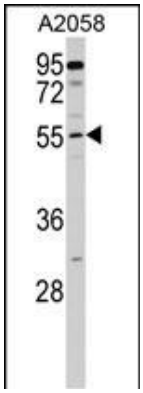
Tu, L.C., et al. Mol. Cell Proteomics 6(4):575-588(2007)

Images



CNDP2 Antibody (C-term) (Cat. #AP17117b) western blot analysis in A2058 cell line lysates (35ug/lane).This demonstrates the CNDP2 antibody detected the CNDP2 protein (arrow).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.