

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Carnosine Dipeptidase 1/CNDP1 in direct ELISAs.
Source	Monoclonal Mouse IgG ₁ Clone # 352213
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Carnosine Dipeptidase 1/CNDP1 Pro28-His507 Accession # Q96KN2
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Immunoprecipitation	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human Carnosine Dipeptidase 1/CNDP1 (Catalog # 2489-ZN), see our available Western blot detection antibodies
Neutralization		Measured by its ability to neutralize Recombinant Human Carnosine Dipeptidase 1/CNDP1 (0.5 µg/mL, Catalog # 2489-ZN) cleavage of the fluorogenic peptide substrate L-Carnosine (0.5 mM). The Neutralization Dose (ND ₅₀) is typically 0.6 µg/mL.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

The human CNDP1 gene encodes carnosine dipeptidase 1, a member of the M20 family of metalloproteases (1, 2). Also known as X-His dipeptidase, glutamate carboxypeptidase-like protein 2 (CPGL-2) or carnosinase 1 (CN1), CNDP1 is a secreted dipeptidase with a narrow specificity for Xaa-His dipeptides including those with Xaa = β-Ala (carnosine) and Xaa = γ-aminobutyric acid (homocarnosine), two naturally occurring dipeptides with potential neuroprotective and neurotransmitter functions in the brain. In comparison, a closely related protein known as CNDP2, CPGL or CN2, is a cytosolic nonspecific dipeptidase. CNDP1 consists of a signal peptide (residues 1 to 26) and the mature chain (residues 27 to 507). The amino acid sequence of human CNDP1 is 97%, 85%, 82% and 67% identical to that of chimpanzee, canine, mouse/rat and chicken.

References:

1. Teufel, M. *et al.* (2004) *J. Biol. Chem.* **278**:6521.
2. Bauer, K. (2004) in *Handbook of Proteolytic Enzymes* (ed. Barrett, *et al.*) p. 1022, Academic Press, San Diego.