Recombinant Human DTD2 Protein, Myc/DDK-tagged, C13 and N15-labeled

Cat. No. DTD2-2792H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	C14orf126 MS Standard C13 and N15-labeled recombinant protein (NP_542395) with a C-terminal MYC/DDK tag, was expressed in HEK293 cells.
Species	Human
Source	HEK293
Description	Deacylates mischarged D-aminoacyl-tRNAs. Also deacylates mischarged glycyl-tRNA(Ala), protecting cells against glycine mischarging by AlaRS. Probably acts by rejecting L-amino acids from its binding site rather than specific recognition of D-amino acids. Catalyzes the hydrolysis of D-tyrosyl-tRNA(Tyr), has no activity on correctly charged L-tyrosyl-tRNA(Tyr). By recycling D-aminoacyl-tRNA to D-amino acids and free tRNA molecules, this enzyme counteracts the toxicity associated with the formation of D-aminoacyl-tRNA entities in vivo and helps enforce protein L-homochirality. In contrast to DTD1, deacylates L-Ala mischarged on tRNA(Thr)(G4.U69) by alanine-tRNA ligase AARS. Can deacylate L-Ala due to a relaxed specificity for substrate chirality caused by the trans conformation of the Gly-Pro motif in the active site. Also hydrolyzes correctly charged, achiral, glycyl-tRNA(Gly) in vitro, although in vivo EEF1A1/EF-Tu may protect cognate achiral glycyl-tRNA(Gly) from DTD2-mediated deacetylation.
Molecular Mass	18.7 kDa

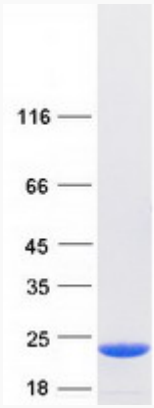
Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

AA Sequence	MAEGSRIPQARALLQQCLHARLQIRPADGDVAAQWVEVQRGLVIYVCFFKGADKEL LPKMVNTLLNVKLSETENGKHVSILDLPGNILIIPQATLGGRLKGRNMQYHSNSGKEE GFELYSQFVTLCEKEVAANSKCAEARVVVEHGTYGNRQVLKLDTNGPFTHLIEFTRT RPLEQKLISEEDLAANDILDYKDDDDKV
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 3 months from receipt of products under proper storage and handling conditions.
Storage	Store at -80 centigrade. Avoid repeated freeze-thaw cycles.
Concentration	50 μg/mL as determined by BCA
Storage Buffer	100 mM glycine, 25 mM Tris-HCl, pH 7.3.

GENE INFORMATION

Gene Name	DTD2 D-aminoacyl-tRNA deacylase 2 [Homo sapiens (human)]
Official Symbol	DTD2
Synonyms	DTD2; D-aminoacyl-tRNA deacylase 2; ATD; C14orf126; D-aminoacyl-tRNA deacylase 2; D-tyrosyl-tRNA deacylase 2 (putative); D-tyrosyl-tRNA(Tyr) deacylase 2; L-alanyl-tRNA deacylase; animalia-specifc tRNA deacylase; animalia-specific tRNA deacylase; probable D-tyrosyl-tRNA(Tyr) deacylase 2; putative D-tyrosyl-tRNA deacylase 2; putative D-tyrosyl-tRNA(Tyr) deacylase 2; EC 3.1.1.96
Gene ID	112487
mRNA Refseq	NM_080664

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Protein Refseq	NP_542395
UniProt ID	Q96FN9
SDS-PAGE	

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