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Product Datasheet

Rat ODC protein, His tag, Unconjugated GTX00369-PRO

Article Name	Rat ODC protein, His tag, Unconjugated
Biozol Catalog Number	GTX00369-PRO
Supplier Catalog Number	GTX00369-pro
Alternative Catalog Number	GTX00369-PRO-10
Manufacturer	GeneTex
Category	Proteine/Peptide
Application	FA
Species Reactivity	Rat
Conjugation	Unconjugated
NCBI	24609
UniProt	P09057
Buffer	Reconstitute with 20mM Tris and 150mM NaCl to 0.1-1.0mg/ml. Do not vortex. Lyophilized from 20mM Tris, 150mM NaCl, 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose, ProClin 300.
Expression System	E. coli
Form	Lyophilized powder
Sequence	Full length protein, N-terminal His-Tag, Met1~Val461 (NP_001289012.1)

Application Notes

The enzyme ornithine decarboxylase (ODC) catalyzes the decarboxylation of ornithine (a product of the urea cycle) to form putrescine. This reaction is the committed step in polyamine synthesis. Lysine 69 on ornithine decarboxylase (ODC) binds the cofactor pyridoxal phosphate to form a Schiff base. Ornithine displaces the lysine to form a Schiff base attached to ODC, which decarboxylates to form a quinoid intermediate. This intermediate rearranges to form a Schiff base attached to putrescine, which is attacked by lysine to release putrescine product and reform PLP-bound ODC. Besides, Thymidine Kinase 1, Soluble (TK1) has been identified as an interactor of ODC, thus a binding ELISA assay was conducted to detect the interaction of recombinant rat ODC and recombinant rat TK1. Briefly, ODC were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to TK1-coated microtiter wells and incubated for 2h at 37C. Wells were washed with PBST and incubated for 1h with anti-ODC pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37C. Finally, add 50 µl stop solution to the wells and read at 450nm immediately. The binding activity of ODC and TK1 was in a dose dependent manner.