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Product Datasheet

Human Tyrosine Aminotransferase protein, His tag, Unconjugated GTX00184-PRO

Article Name	Human Tyrosine Aminotransferase protein, His tag, Unconjugated
Biozol Catalog Number	GTX00184-PRO
Supplier Catalog Number	GTX00184-pro
Alternative Catalog Number	GTX00184-PRO-10
Manufacturer	GeneTex
Category	Proteine/Peptide
Application	FA
Species Reactivity	Human
Conjugation	Unconjugated
NCBI	6898
UniProt	P17735
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	N-terminal His-Tag, Cys221~Lys454 (NP_000344.1)

Application Notes

Tyrosine aminotransferase (TAT) is an enzyme present in the liver and catalyzes the conversion of tyrosine to 4-hydroxyphenylpyruvate. In humans, the tyrosine aminotransferase protein is encoded by the TAT gene. A deficiency of the enzyme in humans can result in what is known as Type II Tyrosinemia, wherein there is an abundance of tyrosine as a result of tyrosine failing to undergo an aminotransferase reaction to form 4-hydroxyphenylpyruvate. Tyrosine Aminotransferase as a dimer has two identical active sites. Lys280 is attached to PLP, which is held in place via two nonpolar amino acid side chains, phenylalanine and isoleucine (see thumbnail on right). The PLP is also held in place by hydrogen bonding to surrounding molecules mainly by its phosphate group. Besides, Heat Shock 70kDa Protein 8 (HSPA8) has been identified as an interactor of TAT, thus a binding ELISA assay was conducted to detect the interaction of recombinant human TAT and recombinant human HSPA8. Briefly, TAT were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to HSPA8-coated microtiter wells and incubated for 2h at 37C. Wells were washed with PBST and incubated for 1h with anti-TAT 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 TAT and HSPA8 was in a dose dependent manner.