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## Product Datasheet

### Human DNase I protein, His tag, Unconjugated GTX00172-PRO

Article Name	Human DNase I protein, His tag, Unconjugated
Biozol Catalog Number	GTX00172-PRO
Supplier Catalog Number	GTX00172-pro
Alternative Catalog Number	GTX00172-PRO-10
Manufacturer	GeneTex
Category	Proteine/Peptide
Application	FA
Species Reactivity	Human
Conjugation	Unconjugated
NCBI	<a href="#">1773</a>
UniProt	<a href="#">P24855</a>
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, Gly19~Ala259 (NP_005214.2)

#### Application Notes

Deoxyribonuclease I (usually called DNase I) is a nonspecific endonuclease that cleaves DNA preferentially at phosphodiester linkages adjacent to a pyrimidine nucleotide, yielding 5-phosphate-terminated polynucleotides with a free hydroxyl group on position 3, on average producing tetranucleotides. It acts on single-stranded DNA, double-stranded DNA, and chromatin. DNase I can be activated by bivalent metals such as  $Mg^{2+}$  and  $Ca^{2+}$ . This endonuclease enzyme is common reagents used in biochemical methods requiring digestion of DNA and recovery of RNA, or where DNA is to be removed without affecting structural proteins or enzymes. For example, DNase I is frequently used to remove template DNA following in vitro transcription, and to remove contaminating DNA in total RNA preparations (especially those from transfected cells that may contain plasmid DNA), used for ribonuclease protection assays, cDNA library construction, and RT-PCR. Besides, Actin Beta (ACTb) has been identified as an interactor of DNase I, thus a binding ELISA assay was conducted to detect the interaction of recombinant human DNase I and recombinant human ACTb. Briefly, DNase I were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100  $\mu$ l were then transferred to ACTb-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-DNase I 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 37°C. Finally, add 50  $\mu$ l stop solution to the wells and read at 450nm immediately. The binding activity of DNase I and ACTb was in a dose dependent manner.