Human DNase I protein, His tag

Cat. No. GTX00172-pro

Applications	Functional Assay
Species	Human

Package
10 µg

Applications

Application Note

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 Mg2 and Ca2 . This endonuclease enzyme is common reagents used in biochemical methods requiring diestion 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 contraction, 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 µl were then transferred to ACTb-coated microtiter wells and incubated for 2h at 37ºC. 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 37ºC. Finally, add 50 µl stop solution to the wells and read at 450nm immediately. The binding activity of of DNase I and ACTb was in a dose dependent manner.

Observed MW (kDa)	28 kDa.

Properties

Form	Lyophilized powder
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.
Preservative	ProClin 300
Storage	For short-term storage (1-2 weeks), store at 4ºC. For long-term storage, store at -20ºC or below. After reconstitution, keep as concentrated solution. Avoid freeze-thaw cycles.
Region/Sequence	N-terminal His-Tag; Gly19~Ala259 (NP_005214.2)
Expression System	E. coli
Purity	> 90%
Endotoxin	< 1 EU/µg
Conjugation	Unconjugated
Note	For laboratory use only. Not for any clinical, therapeutic, or diagnostic use in humans or animals. Not for animal or human consumption.

For full product information, images and publications, please visit our website.

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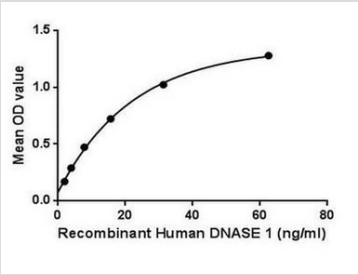
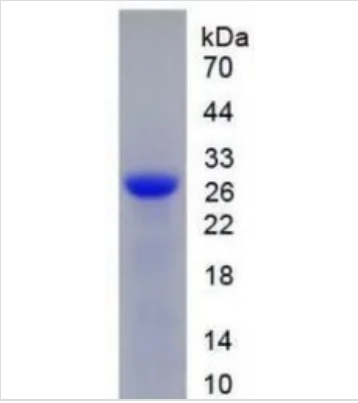
DATA IMAGES



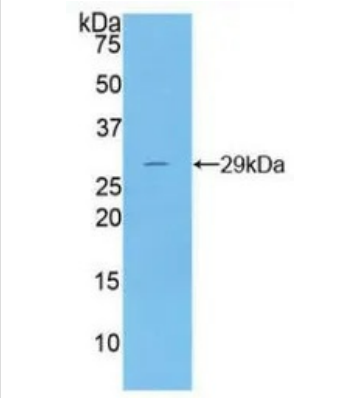
GTX00172-pro Functional Assay Image

Functional ELISA analysis of GTX00172-pro Human DNase I protein which can bind immobilized ACT beta protein.



GTX00172-pro Image

SDS-PAGE analysis of GTX00172-pro Human DNase I protein.



GTX00172-pro Image

WB analysis of GTX00172-pro Human DNase I protein.

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