

APL441Mu01 100µg

Active Deoxyribonuclease I Like Protein 3 (DNASE1L3)

Organism Species: *Mus musculus (Mouse)*

Instruction manual

FOR RESEARCH USE ONLY

NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Val51~Ser310

Tags: N-terminal His-tag

Purity: >80%

Endotoxin Level: <1.0EU per 1µg (determined by the LAL method).

Buffer Formulation: PBS, pH7.4, containing 0.01% Sarcosyl, 5%Trehalose .

Original Concentration: 200µg/mL

Applications: Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

Predicted isoelectric point: 8.9

Predicted Molecular Mass: 33.9kDa

Accurate Molecular Mass: 34kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.

Store at 2-8°C for one month.

Aliquot and store at -80°C for 12 months.

Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

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VKIIRCDLI LLMEIKDSSN NICPMLMEKL NGNSRRSTTY NYVISSRLGR
NTYKEQYAFV YKEKLVSVKT KYHYHDYQDG DTDVFSREPF VVWFHSPFTA
VKDFVIVPLH TTPETSVKEI DELVDVYTDV RSQWKTEFI FMGDFNAGCS
YVPKKAQNI RLRTDPKFVW LIGDQEDTTV KKSTSCAYDR IVLCGQEIVN
SVVPRSSGVF DFQKAYDLSE EEALDVSDHF PVEFKLQSSR AFTNNRKSVS
LKKRKKGNRS
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[ACTIVITY]

Deoxyribonuclease 1 Like 3 (DNASE1L3) is a mammalian endonuclease predominantly expressed in macrophages and dendritic cells. It plays a critical role in degrading extracellular DNA during programmed cell death (apoptosis), thereby preventing the accumulation of self-DNA and the subsequent initiation of autoimmune responses. Notably, DNASE1L3 is essential for cleaving chromatin within neutrophil extracellular traps (NETs) and circulating cell-free DNA (cfDNA), which is pivotal for maintaining immune tolerance. Besides, Deoxyribonuclease I (DNASE1) has been identified as an interactor of DNASE1L3, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant mouse DNASE1L3 and recombinant human DNASE1. Briefly, biotin-linked DNASE1L3 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100µl were then transferred to DNASE1-coated microtiter wells and incubated for 1h at 37 °C. Wells were washed with PBST 3 times and incubation with Streptavidin-HRP for 30min, then wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 °C. Finally, add 50µl stop solution to the wells and read at 450nm immediately. The binding activity of DNASE1L3 and DNASE1 was shown in Figure 1, the

EC50 for this effect is 0.58 μ g/mL.

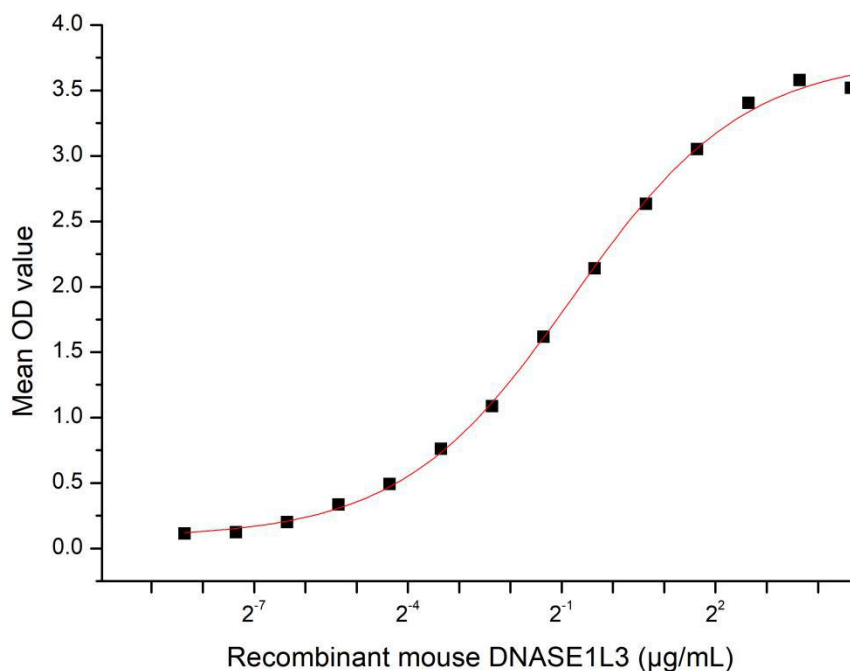


Figure 1. The binding activity of recombinant mouse DNASE1L3 and recombinant human DNASE1

[IDENTIFICATION]

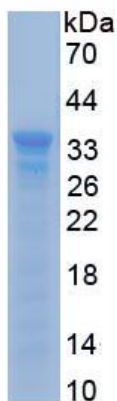


Figure 2. SDS-PAGE

Sample: Active recombinant DNASE1L3, Mouse

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.