

APA285Hu01 100µg
Active Histone H3 (H3)

Organism Species: *Homo sapiens* (Human)
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: Met1~Ala136

Tags: N-terminal His-tag

Purity: >90%

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

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

Original Concentration: 200µg/mL

Applications: Cell culture; Activity Assays.

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

Predicted isoelectric point: 11.7

Predicted Molecular Mass: 16.7kDa

Accurate Molecular Mass: 18kDa 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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MARTKQTARKSTGGKAPRKQLATKAARKSAPATGGVKKPHRYRPGTVALREIRRYQKSTELLIRKLPFQR  
LVREIAQDFKTDLRFQSSAVMALQEACEAYLVGLFEDTNLCAIHAKRVTIMPKDIQLARRIGERA
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[ACTIVITY]

Histone H3 is one of the five main histone proteins involved in the structure of chromatin in eukaryotic cells. H3 is highly conserved across species, indicating its critical role in chromatin structure and function. It is subject to various post-translational modifications, including acetylation, methylation, phosphorylation, and ubiquitination, which can affect gene expression by altering chromatin structure and recruiting regulatory proteins. These modifications are key components of epigenetic mechanisms that regulate gene activity without altering the underlying DNA sequence. Besides, Peptidylprolyl Isomerase E (PPIE) has been identified as an interactor of H3, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human H3 and recombinant mouse PPIE. Briefly, H3 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to PPIE-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with PBST and incubated for 1h with anti-H3 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37°C, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50 μ L stop solution to the wells and read at 450/630 nm immediately. The binding activity of recombinant human H3 and recombinant mouse PPIE was shown in Figure 1, the EC₅₀ for this effect is 2.40 ug/mL.

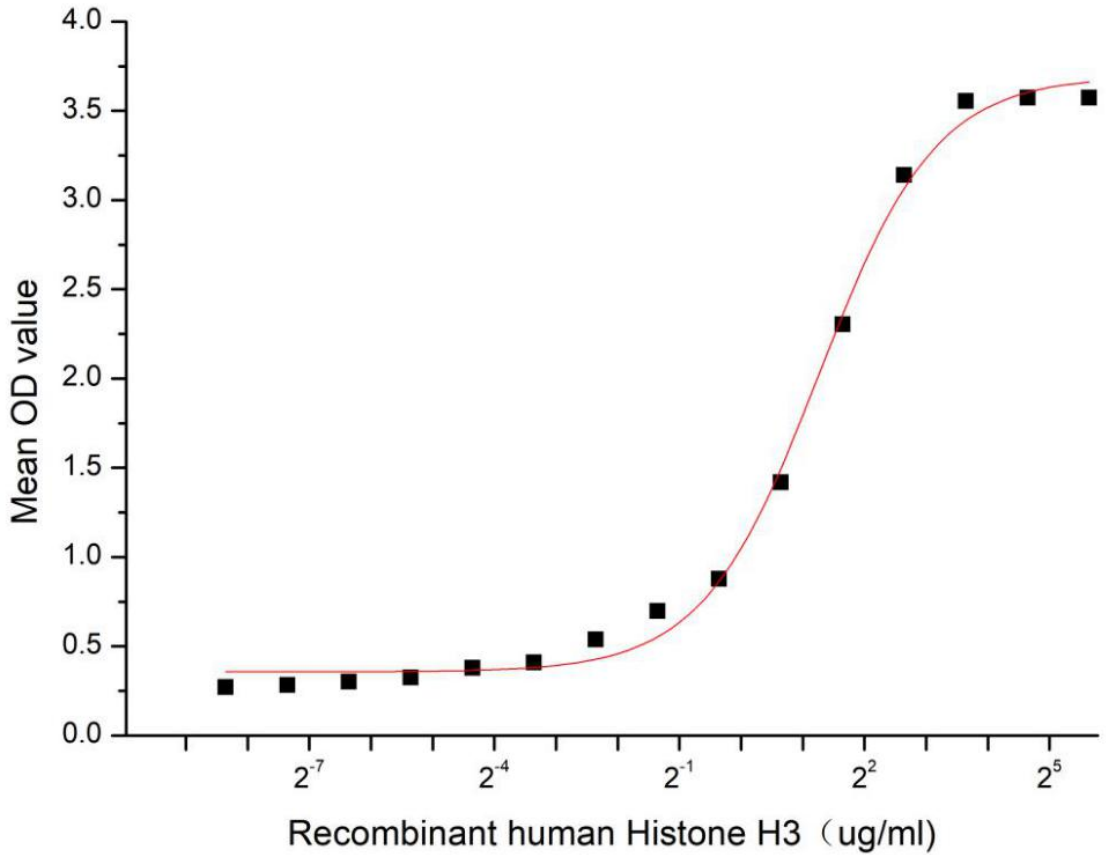


Figure 1. The binding activity of recombinant human H3 and recombinant mouse PPIE

[IDENTIFICATION]

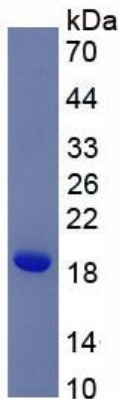


Figure 2. SDS-PAGE

Sample: Active recombinant H3, Human

[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.