APE135Hu61 100μg
Active Defensin Alpha 3, Neutrophil Specific (DEFa3)
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: Eukaryotic expression.
Host: 293F cell
Residues: Glu20~Cys94
Tags: N-terminal His-tag
Purity: >90%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 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: 4.9
Predicted Molecular Mass: 9.9kDa
Accurate Molecular Mass: 12kDa 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 37ºC 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]

EPLQARADEVAAAPEQIAADIPEVVVSLAWDESLAPKHPGSRKNMDCYCRIPACIAGERRYGTCI
YQGRLWAFCC

[ACTIVITY]

Defensin Alpha 3, Neutrophil Specific (DEFa3) is a cationic antimicrobial peptide belonging to the alpha-defensin family, primarily expressed in neutrophils and epithelial tissues. It exhibits potent broad-spectrum activity against Gram-positive/negative bacteria, fungi, and enveloped viruses by disrupting microbial membranes. Beyond direct pathogen clearance, DEFa3 modulates immune signaling and enhances phagocyte function, reinforcing host innate immunity. DEFa3 binds with DEFa4 (DEF4), forming heterodimers to synergistically amplify antimicrobial and immunomodulatory effects. Briefly, DEFa3 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to DEFa4-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-DEFa3 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 μL stop solution to the wells and read at 450/630nm immediately.Measured by its binding ability in a functional ELISA. When Recombinant DEFa4 is Immobilized at 2 μg/mL(100 uLwell), the concentration of DEFa3 that produces 50% optimal bindingresponse is found to be approximately 1.10488 μg/mL.

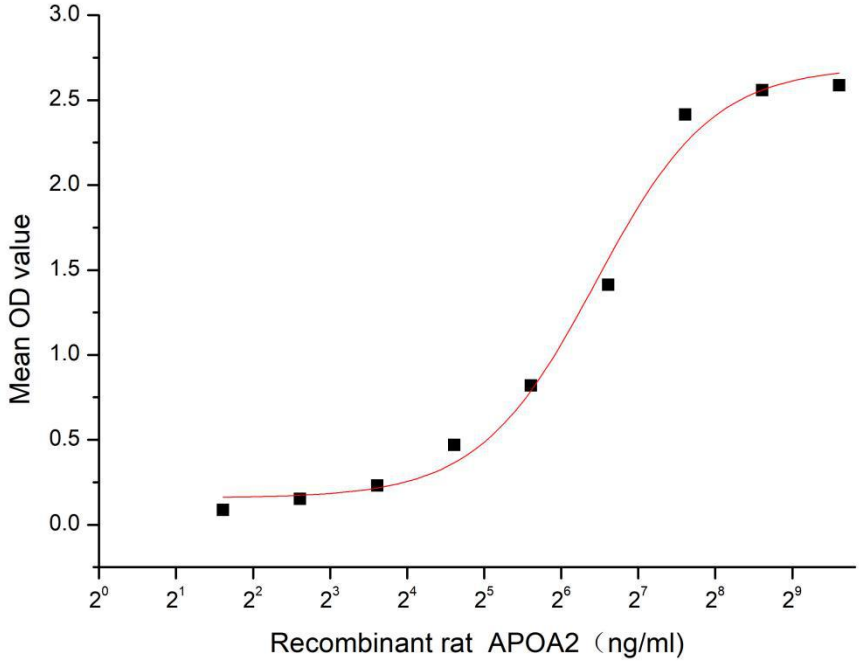


Figure 1. The binding activity of recombinant DEFa3 and DEFa4

[IDENTIFICATION]

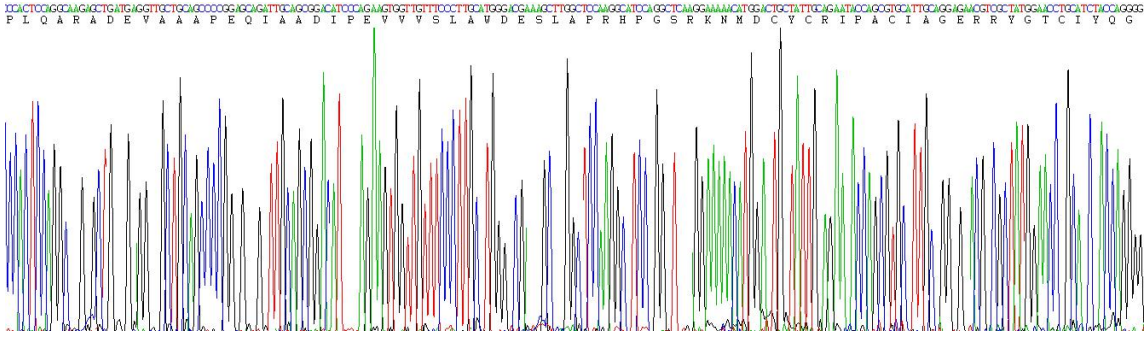


Figure 2. Gene Sequencing (extract)

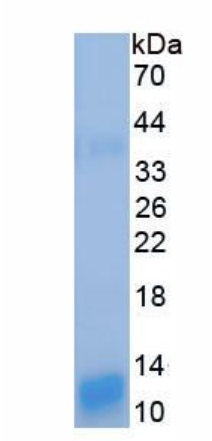


Figure 3. SDS-PAGE

Sample: Active recombinant DEFa3, 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.