APP966Hu01 100µg
Active Homeobox Protein A13 (HOXA13)
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~Ser388

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: 9.4

Predicted Molecular Mass: 43.4kDa

Accurate Molecular Mass: 44kDa 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.
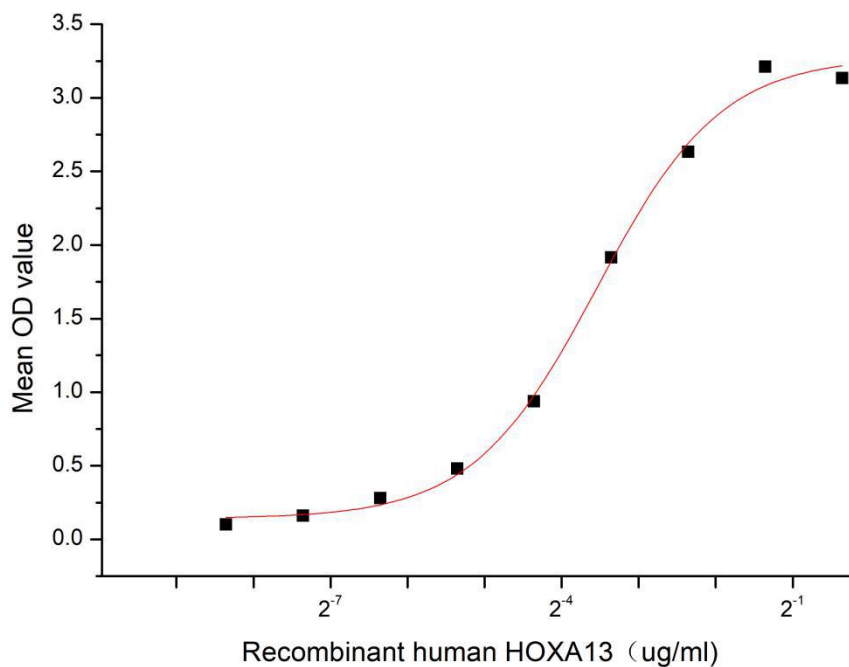
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[ACTIVITY]

Homeobox protein Hox-A13 (HOXA13) is a transcription factor encoded by the HOXA13 gene, part of the HOX gene family. It plays a crucial role in limb and urogenital development by regulating gene expression during embryonic development. Mutations in HOXA13 are associated with developmental disorders such as Hand-Foot-Genital Syndrome (HFGS).Besides,Absent In Melanoma 2 (AIM2) has been identified as an interactor of HOXA13, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human HOXA13 and recombinant human AIM2.

Briefly, biotin-linked HOXA13 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to AIM2-coated microtiter wells and incubated for 1h at 37℃. 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℃. Finally, add 50μl stop solution to the wells and read at 450nm immediately. The binding activity of HOXA13 and AIM2 was shown in Figure 1, the EC50 for this effect is 0.086ug/mL.
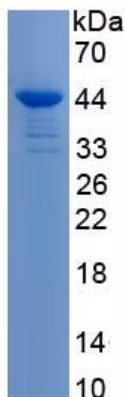
Figure 1. The binding activity of recombinant human HOXA13 and recombinant human AIM2

[IDENTIFICATION]
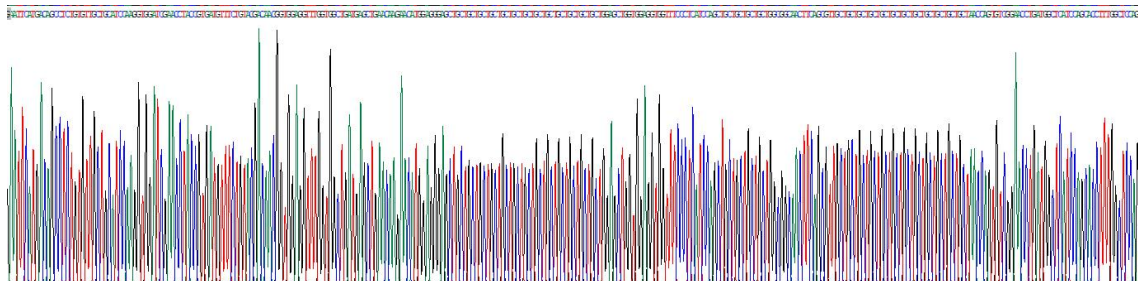
Figure 2. Gene Sequencing (extract)

Figure 3. SDS-PAGE

Sample: Active recombinant HOXA13, Human

[<u>IMPORTANT NOTE</u>]

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.