APP951Hu01 100μg
Active Homeobox Protein D10 (HOXD10)
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~Ser340
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: 8.5
Predicted Molecular Mass: 42.1kDa
Accurate Molecular Mass: 50kDa 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 2-8ºC for one month.
Aliquot and store at -80ºC 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]

MSFPNSSPAANTFLVDSLISACRSDSFYSSSASMYMPPPSADMGTYGMQTCG
LLPSLAKREVNHQNMGMNVHPYIPQVDSWTDPNRSCRIEQPVTQQVPTCSF
TTNIKEESNCCMYSDKRNKLISAEVPSYQRLVPESCPVENPEVPVPGYFRLSQTY
ATGKTQEYNNSPEGSSTVMLQLNPRGAAKPQLSAAQLQMEKKMNEPVSGQE
PTKVSQVESPEAKGGLPEERSCLAEVSVSSPEVQEKESKEEIKSDTPTSNWLTAK
SGRKKRCPYTKHQTLELEKEFLFNMYLTRERRLEISKSVNLTDRQVKIWFQNRR
MKLKKMSRENRIRELTANLTFS

[ACTIVITY]

Recombinant Human Homeobox protein Hox-D10 (HOXD10) is a sequence-specific transcription factor that belongs to the homeobox - containing transcription factor family. HOXD10 protein plays crucial roles in various biological processes, especially during embryonic development.It is involved in patterning and differentiation of tissues and organs, particularly in the development of the axial skeleton and limb buds.It has also been reported to suppress ovarian cancer, hepatocellular carcinoma and other cancer cells. Re-expression of HOXD10 results in significant inhibition of cell survival, induction of cell apoptosis and impairment of cell migration and invasion. Besides,Hoxd-10 can bind to and transactivate the Shh promoter in vitro, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human HOXD10 and recombinant human SHH . Briefly, biotin-linked HOXD10 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to SHH-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 HOXD10 and SHH was shown in Figure 1, the EC50 for this effect is 0.023ug/mL.

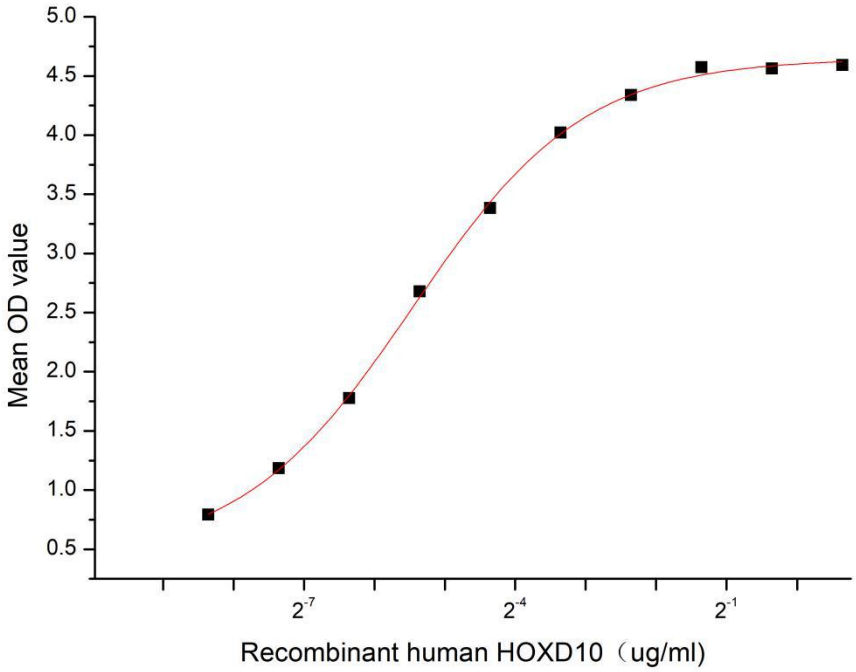

Figure 1. The binding activity of recombinant human HOXD10 and recombinant human SHH

[IDENTIFICATION]

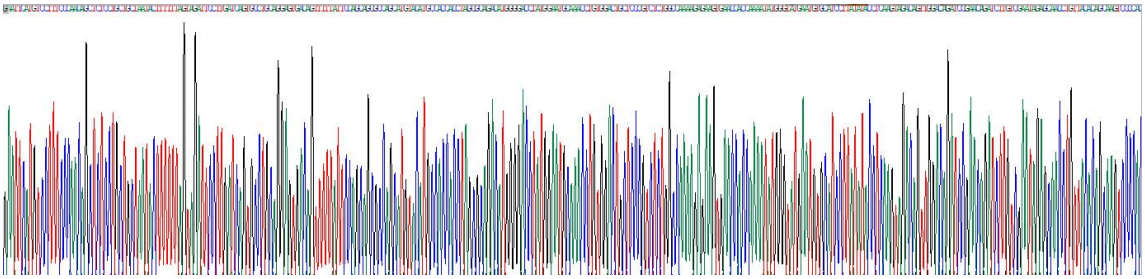

Figure 2. Gene Sequencing (extract)

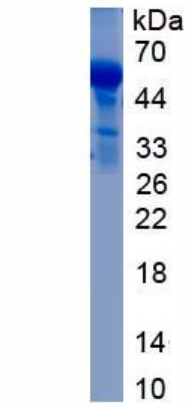

Figure 3. SDS-PAGE

Sample: Active recombinant HOXD10, 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.