APC137Hu01 10μg
Active Collagen Type XV (COL15)
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: Asn1212~Lys1388
Tags: N-terminal His-tag
Purity: >95%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 0.01% Sarcosyl, 5%Trehalose .
Original Concentration: 1000μg/mL
Applications: Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 8.4
Predicted Molecular Mass: 21.3kDa
Accurate Molecular Mass: 21kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.5-1.0 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]

NYEKPALHL AALNMPFSGD IRADFQCFKQ ARAAGLLSTY
RAFLSSHLQD LSTIVRKAER YSLPIVNLKG QVLFNNWDSI FSGHGGQFNM
HIPIYSFDGR DIMTDPSWPQ KVIWHGSSPH GVRLVDNYCE AWRTADTAVT
GLASPLSTGK ILDQKAYSCA NRLIVLCIEN SFMTDARK

[ACTIVITY]

Collagen Type XV (COL15, encoded by COL15A1) is a non-fibrillar FACIT collagen, widely distributed in human tissues and highly enriched in basement membrane zones. It forms a homotrimeric structure with interrupted collagenous domains, functioning to anchor basement membranes to underlying connective tissue stroma and stabilize tissue architecture. Its C-terminal fragment, restin, exhibits anti-angiogenic activity. COL15 acts as a tumor suppressor; its loss correlates with muscle/microvessel degeneration and enhanced cancer cell invasion. Hypoxia upregulates COL15 via HIF-1 α , and it modulates epithelial-mesenchymal transition (EMT) in tumor microenvironments. COL15 indirectly interacts with E-cadherin by regulating EMT signaling, thereby stabilizing E-cadherin-mediated cell-cell adhesion.Thus a functional ELISA assay was conducted to detect the interaction of recombinant human COL15 and recombinant human EMT. Briefly, COL15 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to EMT-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-COL15 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. The binding activity of recombinant human COL15 and recombinant human EMT was shown in Figure 1, the EC50 for this effect is 0.0117 μg/mL.

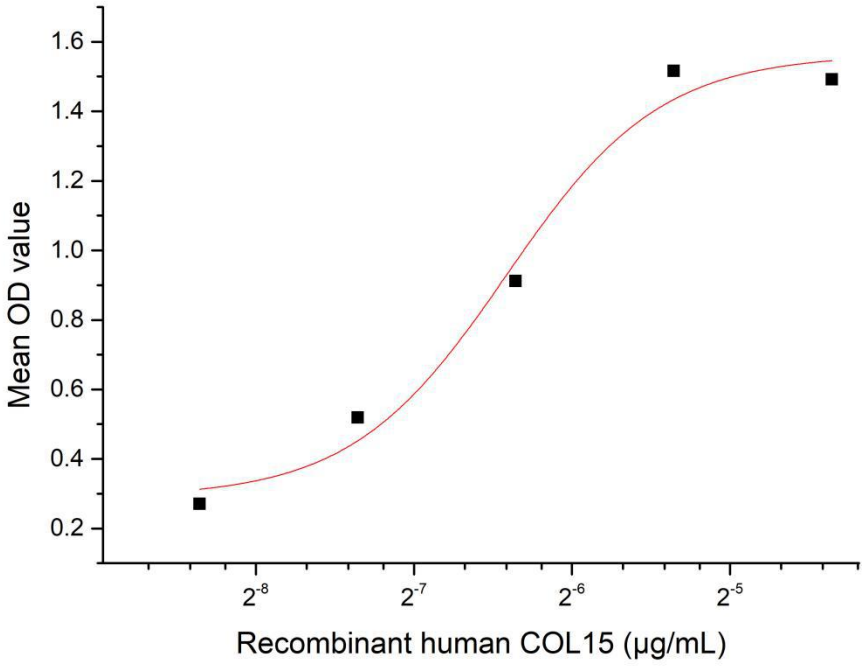

Figure 1. The binding activity of recombinant human COL15 and human EMT

[IDENTIFICATION]

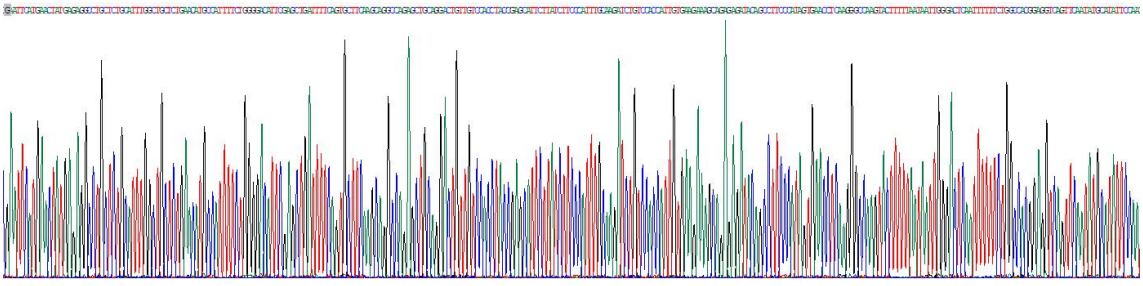

Figure 2. Gene Sequencing (extract)

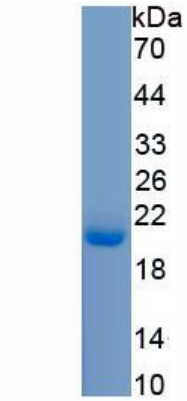

Figure 3. SDS-PAGE

Sample: Active recombinant COL15, 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.