APB817Mu01 100μg
Active Versican (VCAN)
Organism Species: *Mus musculus (Mouse)*
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: Asn3058~Ile3299
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: 200μg/mL
Applications: Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 6.1
Predicted Molecular Mass: 31.6kDa
Accurate Molecular Mass: 35kDa 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]

NPC LNGGTCYPTE TSYVCTCAPG YSGDQCELDF DECHSNPCRN
GATCVDGFNT FRCLCLPSYV GALCEQDTET CDYGWHKFQG QCYKYFAHRR
TWDAAERECR LQGAHLTSIL SHEEQMFVNR VGHDYQWIGL NDKMFEHDFR
WTDGSALQYE NWRPNQPDSF FSAGEDCVVI IWHENGQWND VPCNYHLTYT
CKKGTVACGQ PPVVENAKTF GKMKPRYEIN SLIRYHCKDG FIQRHLPTI

[ACTIVITY]

Versican (VCAN) is a large extracellular matrix proteoglycan that plays critical roles in tissue development, inflammation, and cell adhesion by interacting with hyaluronan and other ECM components. It regulates tissue hydration, structural integrity, and immune cell migration, contributing to cardiovascular disease, cancer progression, and fibrosis through modulation of cell proliferation and matrix remodeling. Proteolytic cleavage of VCAN releases bioactive fragments that influence cellular signaling. Importantly, VCAN binds and sequesters TGFβ1 in the ECM, controlling its bioavailability; upon VCAN cleavage, TGFβ1 is released, activating downstream signaling pathways involved in fibrosis, immune regulation, and tissue repair.Thus a functional ELISA assay was conducted to detect the interaction of recombinant mouse VCAN and recombinant dog TGFb1. Briefly, VCAN was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to TGFb1-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-VCAN 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 mouse VCAN and recombinant dog TGFb1 was shown in Figure 1, the EC50 for this effect is 0.005ug/mL.

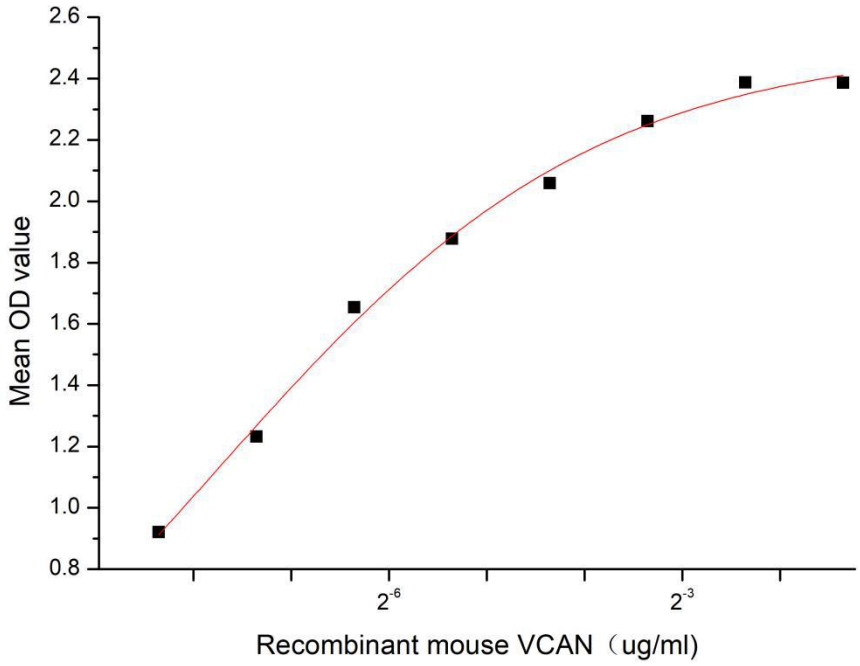

Figure 1. The binding activity of recombinant mouse VCAN and dog TGFb1

[IDENTIFICATION]

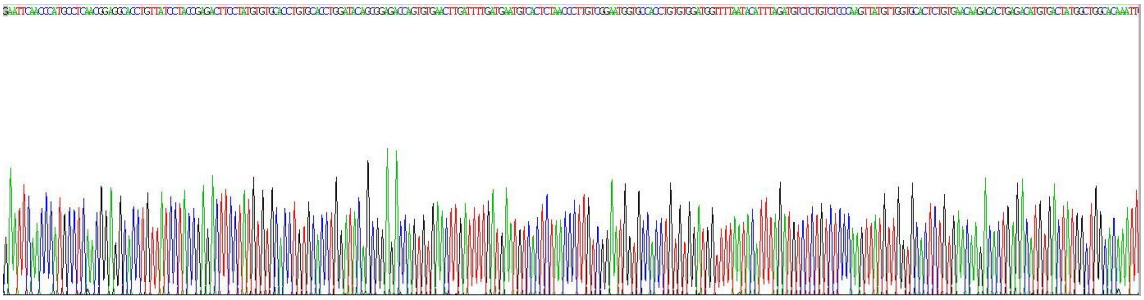

Figure 2. Gene Sequencing (extract)

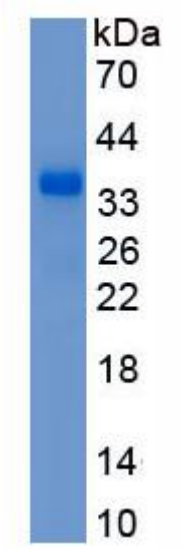

Figure 3. SDS-PAGE

Sample: Active recombinant VCAN, Mouse

[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.