APA611Mu01 10μg
Active Thrombospondin 1 (THBS1)
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: Ile61~Ile259
Tags: N-terminal His-tag
Purity: >90%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 0.01% Sarcosyl, 5%Trehalose .
Original Concentration: 800μg/mL
Applications: Cell culture; Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 5.9
Predicted Molecular Mass: 23.1kDa
Accurate Molecular Mass: 25kDa 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]

IENANLIPAV PDDKFQDLLD AVWADKGFIF LASLRQMKKT
RGTLLAVERK DNTGQIFSVV SNGKAGTLDL SLSLPGKQQV VSVEEALLAT
GQWKSITLFV QEDRAQLYID CDKMESAELD VPIQSIFTRD LASVARLRVA
KGDVNDNFQG VLQNVRFVFG TTPEDILRNK GCSSSTNVLL TLDNNVVNGS
SPAIRTNYI

[ACTIVITY]

Thrombospondin 1 (THBS1) is a matricellular glycoprotein that critically mediates cell–matrix interactions. It promotes cell adhesion by binding to cell surface receptors, including integrins such as αvβ3 and α4β1, and non-integrin receptors like CD36 and CD47. Through its multiple domains, THBS1 forms a molecular bridge between the extracellular matrix and the cell membrane, facilitating focal adhesion assembly and cytoskeletal organization. This adhesive function is essential for modulating cellular processes such as migration, proliferation, and survival, positioning THBS1 as a key regulator in tissue remodeling, wound healing, and angiogenesis. As THBS1 has the function of cell adhesion, we measure the activity of recombinant mouse THBS1 by the ability of the immobilized protein to support the adhesion of AGS cell. When cells are added to different concentrations of recombinant mouse THBS1 coated plates, cells will adhere after 2 hour incubation at 37 ℃. The adhesion of AGS after 2 hour incubation at 37 ℃ observed by inverted microscope was shown in Figure 1. Cell adherent was in a dose dependent manner, the result was shown in Figure 2, the EC50 was 0.6 μg/ml.

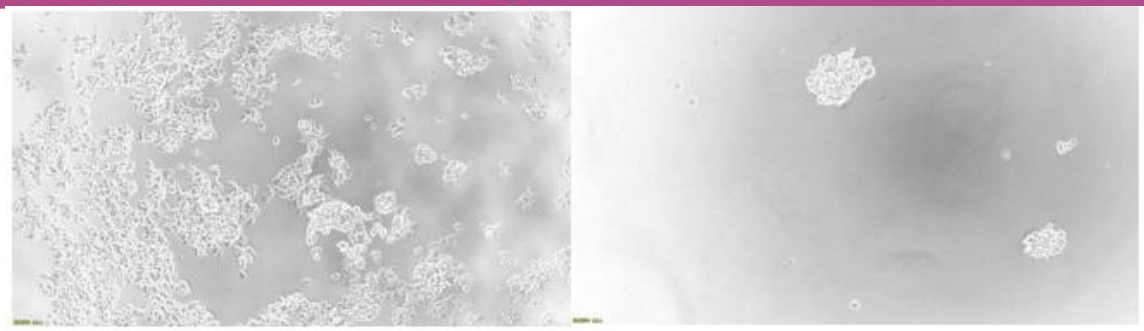

Figure 1.The adhere effect of recombinant mouse THBS1 on AGS cells

(A) AGS cells were seeded into the well containing THBS1 5 μg/ml and incubated for 2 h at 37 ℃;

(B) AGS cells were seeded into the well without THBS1 and incubated for 2 h at 37 ℃;

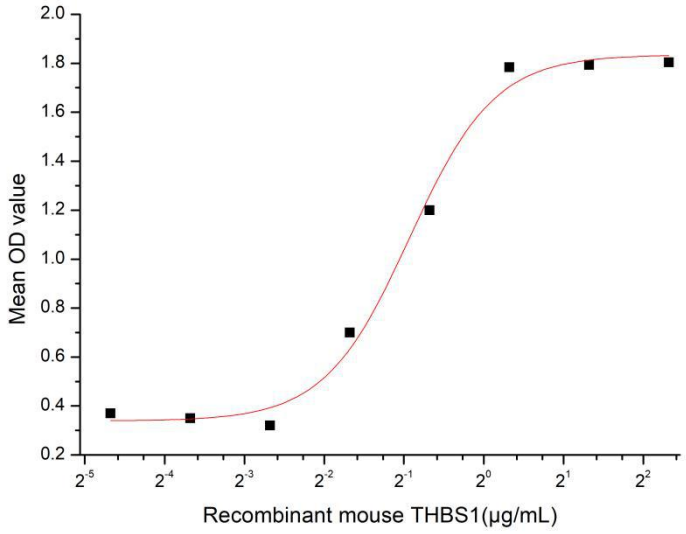

Figure 2. The dose-effect curve of recombinant mouse THBS1 on AGS cells

[IDENTIFICATION]

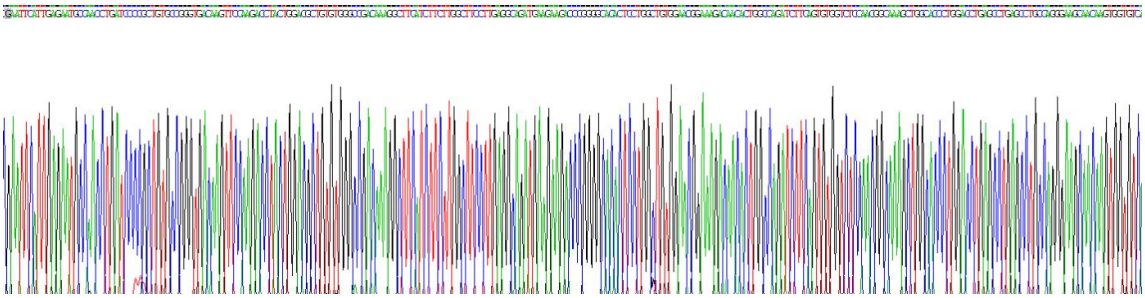

Figure 3. Gene Sequencing (extract)

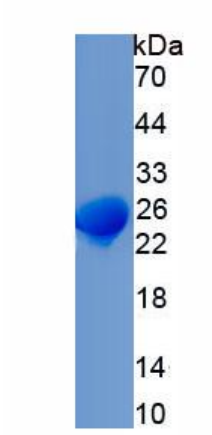

Figure 4. SDS-PAGE

Sample: Active recombinant THBS1, 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.