

APA139Hu01 100µg

Active Tumor Necrosis Factor Related Apoptosis Inducing Ligand (TRAIL)

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: Val114~Gly281

Tags: N-terminal His-tag

Purity: >95%

Endotoxin Level: <1.0EU per 1µg (determined by the LAL method).

Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.01% sarcosyl and 5% trehalose.

Applications: Cell culture; Activity Assays; In vivo assays.

(May be suitable for use in other assays to be determined by the end user.)

Predicted isoelectric point: 8.6

Predicted Molecular Mass: 19.6kDa

Accurate Molecular Mass: 19kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) 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 37°C 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]

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VRERGPQ RVAAHITGTR GRSNTLSSPN SKNEKALGRK  
INSWESSRSG HSFLSNLHLR NGELVIHEKG FYYIYSQTYF RFQEEIKENT  
KNDKQMVQYI YKYTSYPDPI LLMKSARNSC WSKDAEYGLY SIYQGGIFEL  
KENDRIFVSV TNEHLIDMDH EASFFGAFLV G
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[ACTIVITY]

Protein TRAIL (TNF-Related Apoptosis-Inducing Ligand) is a cytokine that belongs to the tumor necrosis factor (TNF) ligand family. TRAIL induces apoptosis in transformed and tumor cells. This protein binds to several members of TNF receptor superfamily including TNFRSF10B/TRAILR2. Thus a binding ELISA assay was conducted to detect the interaction of TRAIL and TNFRSF10B. Briefly, recombinant human TRAIL were diluted serially in PBS, with 0.01%BSA (pH 7.4). Duplicate samples of 100uL were then transferred to TNFRSF10B-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-TRAIL pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50μL stop solution to the wells and read at 450nm immediately. The binding activity of TRAIL and TNFRSF10B was shown in Figure 1, and this effect was in a dose dependent manner.

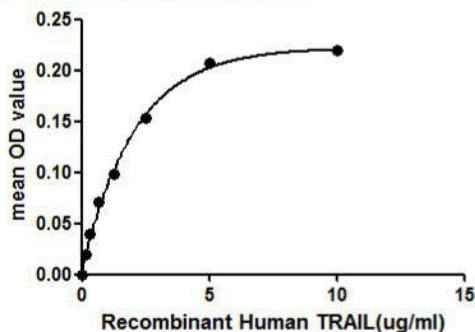


Figure 1. The binding activity of TRAIL with TNFRSF10B.

Tumor Necrosis Factor Related Apoptosis Inducing Ligand (TRAIL) is a recently identified member of the TNF gene superfamily. TRAIL is widely expressed in a variety of human tissues, most predominantly in lung, spleen and prostat. As its name suggests, TRAIL was primarily of particular interest for its ability to selectively induce apoptosis in tumour cells in vitro and in vivo, while apparently exhibiting minimal off-target effects. In order to test the effect of human recombinant TRAIL protein on cell apoptosis, 2x10⁴ A549 cells were seeded into quintuplicate wells of 96-well plates and allowed to attach, replaced with various concentrations of recombinant human TRAIL. After incubated for 72 hours, the 96-well plates were read at OD450 nm. The result was shown in Figure1. It was obvious that rmTRAIL significantly decreased cell viability of A549 cells. The ED50 of recombinant human TRAIL is 0.84 μ g/mL.

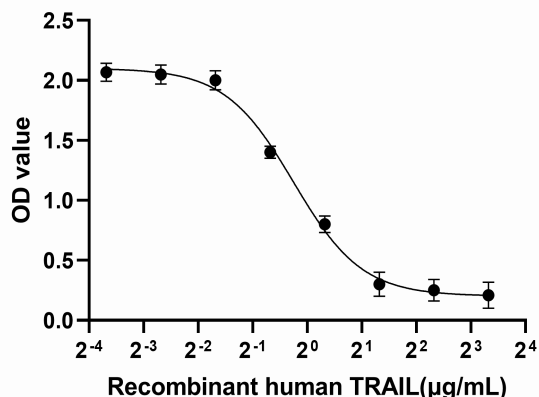


Figure 2. The dose-effect curve of recombinant human TRAIL on A549 cells

[IDENTIFICATION]

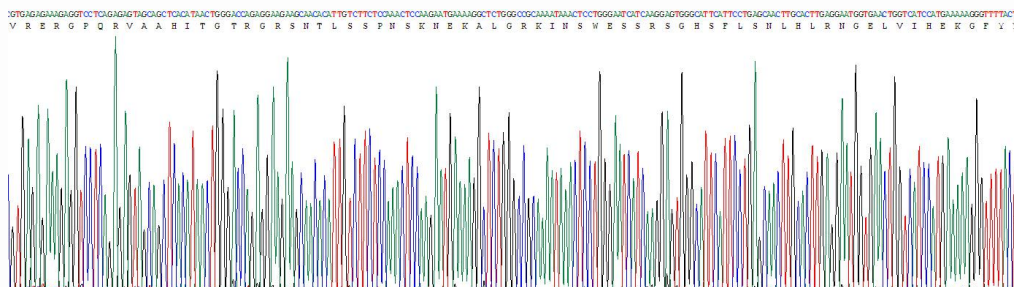


Figure 3. Gene Sequencing (extract)

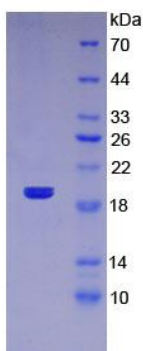


Figure 4. SDS-PAGE

Sample: Active recombinant TRAIL, 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.