APA001Hu01 50μg
Active Activin A (ACVA)
Organism Species: *Homo sapiens* (Human)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1th Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Pro44~Gln178
Tags: N-terminal His-tag
Purity: >90%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.01% skl, 5%Trehalose.
Applications: Cell culture; Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 9.3
Predicted Molecular Mass: 19.0kDa
Accurate Molecular Mass: 22kDa 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 2-8ºC 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]

PKDVPNS
QPEMVEAVKK HILNMLHLKK RPDVTQPVPK AALLNAIRKL HVGKVGENGY
VEIEDDIGRR AEMNELMEQT SEIITFAESG TARKTLHFEI SKEGSDLSVV
ERAEVWLFLK VPKANRTRTK VTIRLFQQ

[ACTIVITY]

Activin A (ACVA) is a member of the TGF-β superfamily of cytokines and involved in a wide range of biological processes including tissue morphogenesis and repair, fibrosis, inflammation, neural development, hematopoiesis, reproductive system function, and carcinogenesis. To test the effect of ACVA on cell apoptosis, A549 cells were seeded into 96-well plates at a density of 3,000 cells/well with 1% serum standard DMEM including various concentrations of recombinant human ACVA. After incubated for 48h, cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10 μL of CCK-8 solution was added to each well of the plate, then the absorbance at 450 nm was measured using a microplate reader after incubating the plate for 2 hours at 37℃. Proliferation of A549 cells after incubation with ACVA for 48h observed by inverted microscope was shown in Figure 1. Cell viability was assessed by CCK-8 (Cell Counting Kit-8) assay after incubation with recombinant human ACVA for 48h. The result was shown in Figure 2. It was obvious that ACVA significantly inhibit cell viability of A549 cells. The ED50 is 5.09 μg/mL.

Figure 1. Inhibition of A549 cells proliferation after stimulated with ACVA

(A) A549 cells cultured in DMEM, stimulated with 10μg/mL ACVA for 48h;

(B) Unstimulated A549 cells cultured in DMEM for 48h.

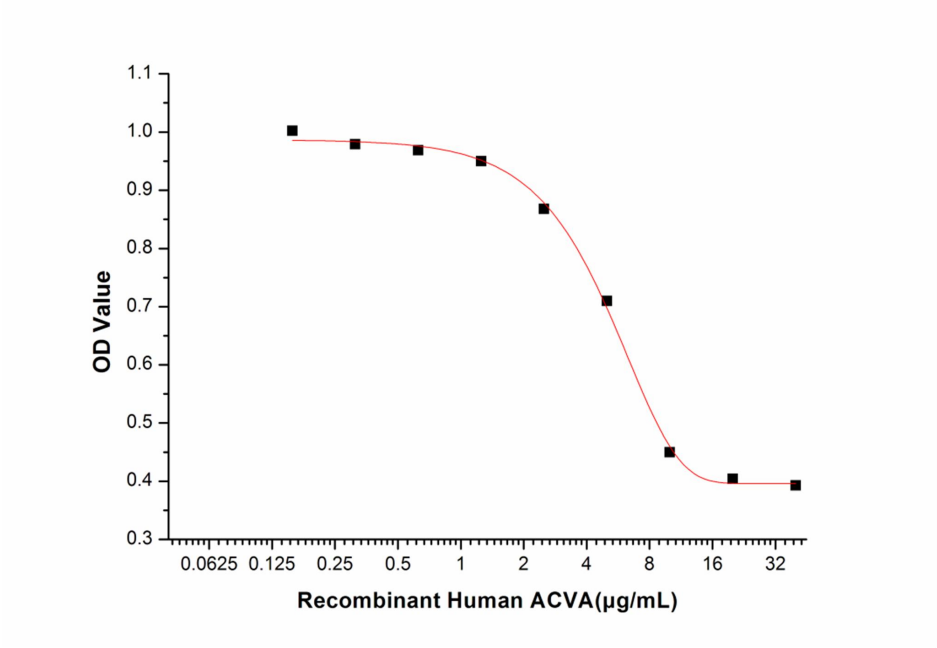

Figure 2. Inhibition of A549 cells proliferation after stimulated with ACVA.

[IDENTIFICATION]

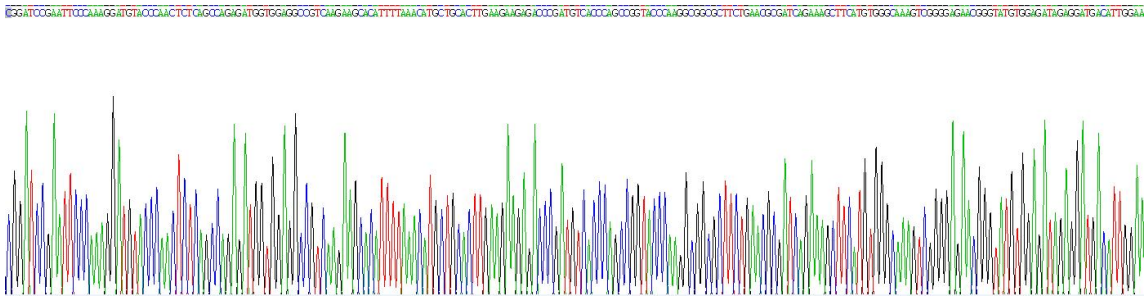

Figure 3. Gene Sequencing (extract)

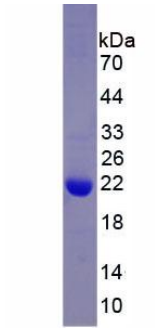

Figure 3. SDS-PAGE

Sample: Active recombinant ACVA, Human

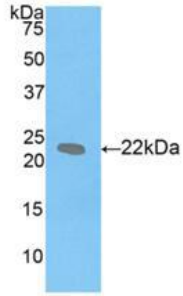

Figure 4. Western Blot

Sample: Recombinant ACVA, Human;

Antibody: Rabbit Anti-Human ACVA Ab (PAA001Hu01)

[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.