

**APA259Hu01 100µg**

**Active Annexin V (ANXA5)**

**Organism Species: *Homo sapiens* (Human)**

***Instruction manual***

FOR RESEARCH USE ONLY

NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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13th Edition (Revised in Aug, 2023)

## **[ PROPERTIES ]**

**Source:** Prokaryotic expression.

**Host:** *E. coli*

**Residues:** Met1~Asp320

**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% SKL, 5%Trehalose .

**Original Concentration:** 200µg/mL

**Applications:** Cell culture; Activity Assays.

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

**Predicted isoelectric point:** 5.2

**Predicted Molecular Mass:** 37.2kDa

**Accurate Molecular Mass:** 34kDa 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 2-8°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** ]

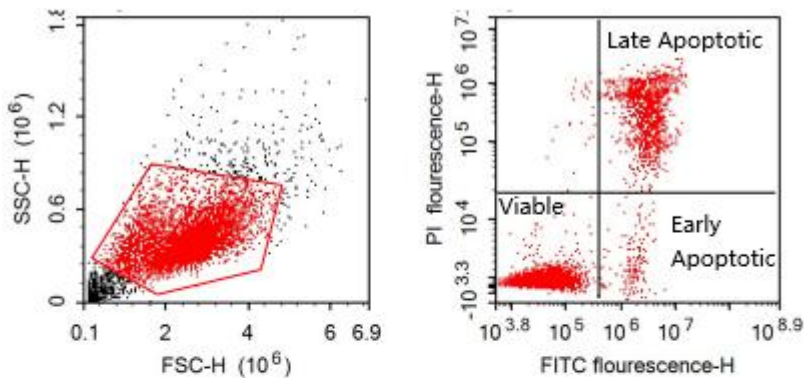
```
MAQVLRGTVT DFPGFDERAD AETLRKAMKG LGTDEESILT LLTSRSNAQR
QEISAAFKTL FGRDLLDDLK SELTGKFEKL IVALMKPSRL YDAYELKHAL
KGAGTNEKVL TEIIASRTP EELRAIKQVYE EEEYGSLEDD VVGDTSGYYQ
RMLVVLLQAN RDPDAGIDEA QVEQDAQALF QAGELKWGTD EEKFITIFGT
RSVSHLRKVF DKYMTISGFQ IEETIDRETS GNLEQLLLAV VKSIRSIPAY
LAETLYYAMK GAGTDDHTLI RVMVSRSEID LFNIRKEFRK NFATSLYSMI
KGDTSGDYKK ALLLLCGEDD
```

## [ **ACTIVITY** ]

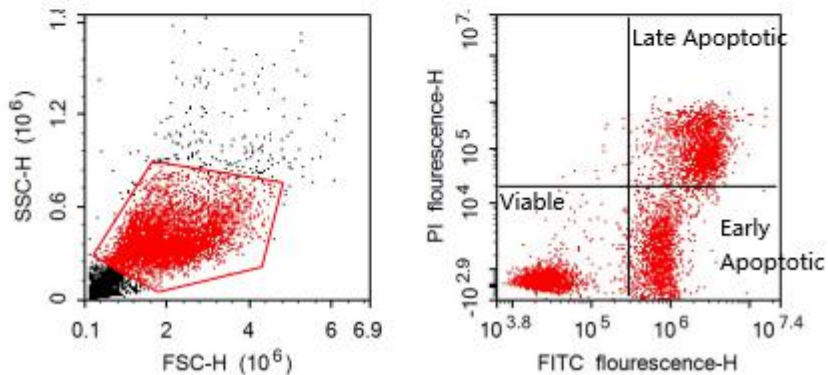
Annexin V (ANXA5) is a multifunctional protein that is highly expressed on the apical surfaces of syncytiotrophoblasts, and plays an important role in haemostatic regulations, maintaining blood fluidity of the placenta. Lower ANXA5 levels have been observed in M2/ANXA5 haplotype carrying chorion. The association found between the maternal carriage of the M2/ANXA5 haplotype and an elevated risk of IUGR and/or PE supports the hypothesis that carrier status of this haplotype and the consequently reduced placental ANXA5 expression might be responsible, at least partially, for the onset of these gestational vascular complications. Annexin V is a calcium-dependent phospholipid binding protein that can be used to bind Phosphatidylserine (PS) during an early apoptosis event where the PS becomes exposed at the cell surface. Jurkat cells were treated with 10 uM camptothecin for 4h, 2\*10<sup>5</sup> cells which were resuspended in binding buffer were stained with 5 ug recombinant human Annexin V-FITC and 10 ul Propidium iodide (PI) for 20min in dark room temperature.

The flow cytometry was used to detect the early apoptotic and late apoptotic of camptothecin-treated Jurkat cells (Figure 2), the combination of Annexin V-FITC and propidium iodide allows for the distinction between early apoptotic cells (Annexin V-FITC positive and propidium iodide negative), late apoptotic and/or necrotic cells (Annexin V-FITC and propidium iodide positive), and viable cells (unstained). Thus, the recombinant human Annexin V-FITC can bind Phosphatidylserine (PS) at early apoptosis of Jurkat.

A



B

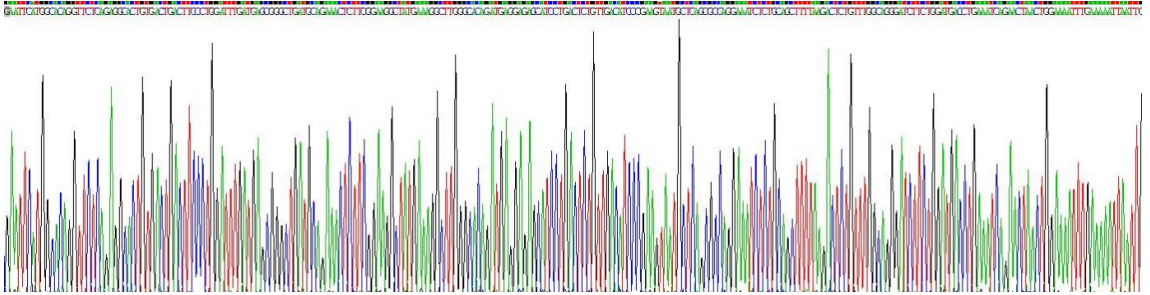


**Figure 1. Flow cytometry of apoptotic Camptothecin-treated Jurkat by annexin V staining**

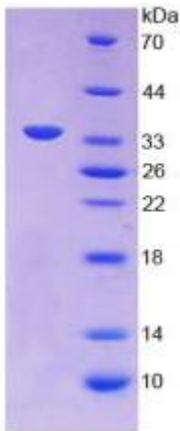
(A) Jurkat were untreated with 10  $\mu$ M camptothecin

(B) Jurkat were treated with 10  $\mu$ M camptothecin

## [ IDENTIFICATION ]



**Figure 2. Gene Sequencing (extract)**



**Figure 3. SDS-PAGE**

**Sample: Active recombinant ANXA5, 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.