

**APC035Hu01 100µg**  
**Active S100 Calcium Binding Protein A7 (S100A7)**  
**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~Gln101

**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% 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:** 6.7

**Predicted Molecular Mass:** 12.7kDa

**Accurate Molecular Mass:** 10kDa 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 ]**

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MSNTQAERSI IGMIDMFHKY TRRDDKIEKP SLLTMMKENF PNFLSACDKK  
GTNYLADVFE KKDKNEDKKI DFSEFLSLLG DIATDYHKQS HGAAPCSGGS  
Q
```

## **[ ACTIVITY ]**

S100 Calcium Binding Protein A7 (S100A7), a member of the S100 family of vertebrate proteins, is an EF-hand type calcium binding protein localized in epithelial cells. S100A7 regulates cell proliferation and differentiation. An S100A7 overexpression may occur in response to inflammatory stimuli, such in psoriasis, besides S100A7 expression is upregulated in several cancers including skin, breast, lung, head, neck, cervix, bladder and gastric cancer. S100 Calcium Binding Protein A12 (S100A12) has been identified as an interactor of S100A7, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human S100A7 and recombinant pig S100A12. Briefly, S100A7 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100  $\mu$ l were then transferred to S100A12-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with PBST and incubated for 1h with anti-S100A7 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37°C, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50  $\mu$ L stop solution to the wells and read at 450/630 nm immediately. The binding activity of recombinant human S100A7 and recombinant pig S100A12 was

shown in Figure 1, the EC50 for this effect is 0.12 ug/mL.

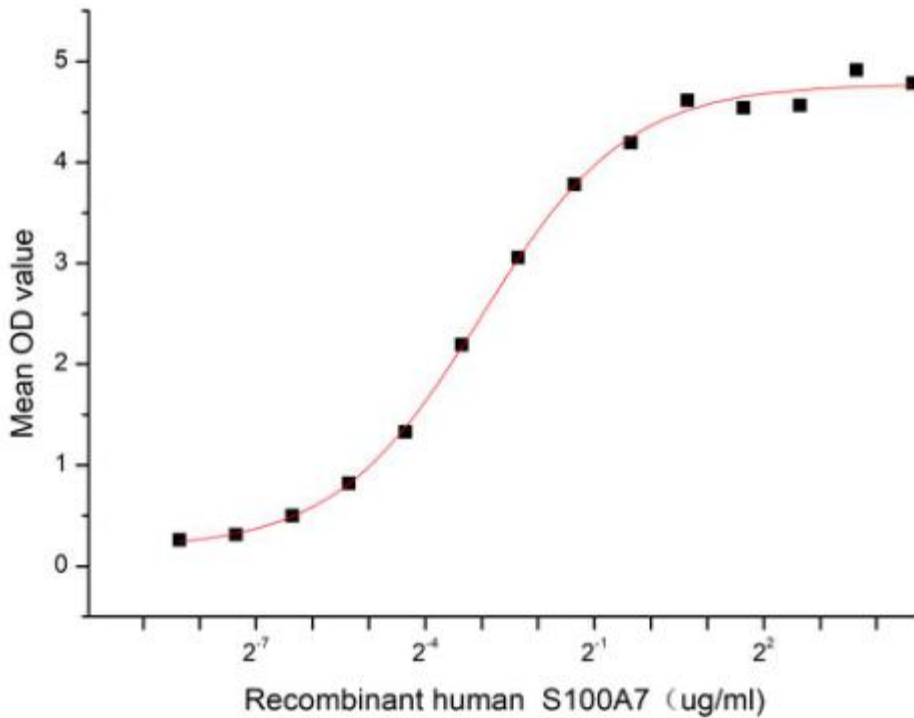


Figure 1. The binding activity of recombinant human S100A7 and recombinant pig S100A12

## [ IDENTIFICATION ]

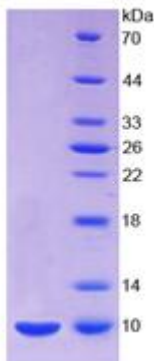


Figure 2. SDS-PAGE

Sample: Active recombinant S100A7, 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.