

**APC035Mu01 100µg**  
**Active S100 Calcium Binding Protein A7 (S100A7)**  
**Organism Species: *Mus musculus* (Mouse)**  
***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~Tyr108

**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:** 200µg/mL

**Applications:** Activity Assays.

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

**Predicted isoelectric point:** 5.7

**Predicted Molecular Mass:** 14.1kDa

**Accurate Molecular Mass:** 16kDa 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.

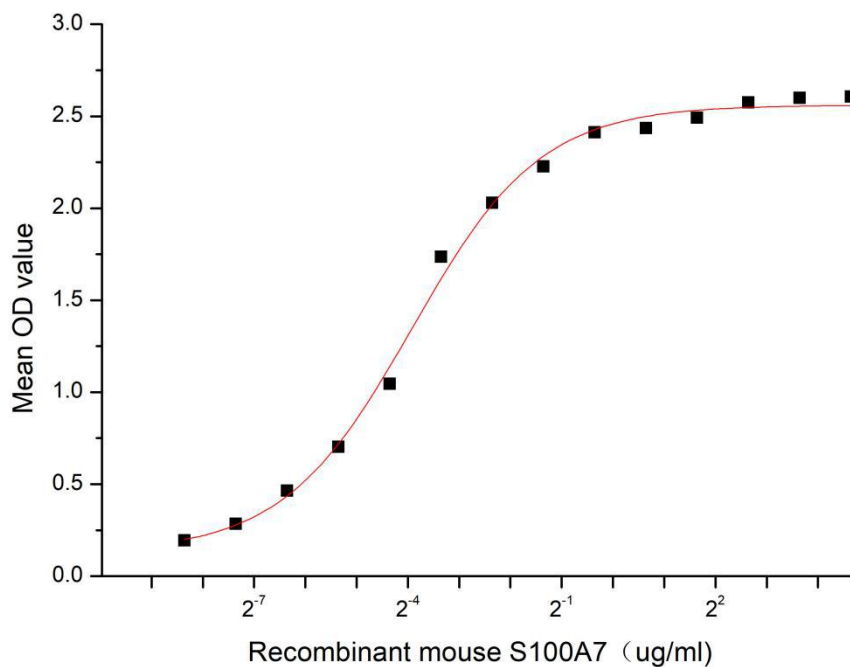
**Stability Test:** The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

## **[ SEQUENCE ]**

```
MPDTPVEDSL FQIIHCFHHY AAREGDKETL SLEELKALLL DSVPRFMDTL  
GRRQPPYYITE LFRAADKNKD NQICFDEFLY ILGKLVKDYH LQFHRQLCAH  
YCTEHSLY
```

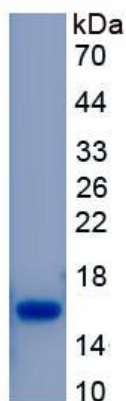
## **[ ACTIVITY ]**

S100 Calcium Binding Protein A7 (S100A7) is a calcium - binding protein predominantly expressed in epithelial cells. It plays roles in innate immunity, inflammation, and cell growth regulation. Linked to psoriasis and cancer, S100A7 exhibits antibacterial activity. S100A7 interacts with S100A11, forming heterodimers that may enhance their functions in cellular signaling and inflammation - related processes. Thus a functional ELISA assay was conducted to detect the interaction of recombinant mouse S100A7 and recombinant human S100A11. Briefly, S100A7 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100  $\mu$ l were then transferred to S100A11-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 450/630nm immediately. The binding activity of recombinant mouse S100A7 and recombinant human S100A11 was shown in Figure 1, the EC50 for this effect is 0.066ug/mL.



**Figure 1. The binding activity of mouse recombinant S100A7 and human S100A11**

## **[ IDENTIFICATION ]**



**Figure 2. SDS-PAGE**

**Sample: Active recombinant S100A7, 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.