

**APB792Ra01 10µg**  
**Active S100 Calcium Binding Protein A8 (S100A8)**  
**Organism Species: *Rattus norvegicus* (Rat)**  
***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~Glu89

**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:** 400µg/mL

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

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

**Predicted isoelectric point:** 5.7

**Predicted Molecular Mass:** 13.9kDa

**Accurate Molecular Mass:** 14kDa 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.

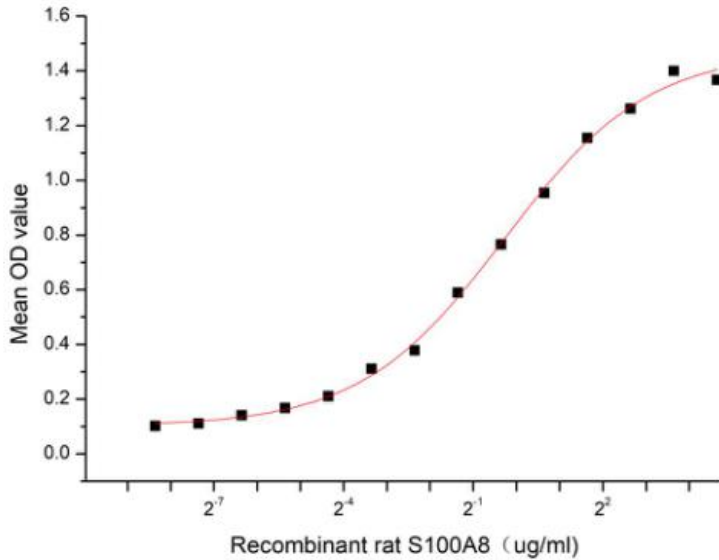
**Stability Test:** The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration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

## **[ SEQUENCE ]**

MATELEKALS NVIEVYHNYS GIKGNHHALY RDDFRKMVTT ECPQFVQKNK  
TESLFKELDV NSDNAINFEE FLVLVIRVGV AAHKDSHKE

## **[ ACTIVITY ]**

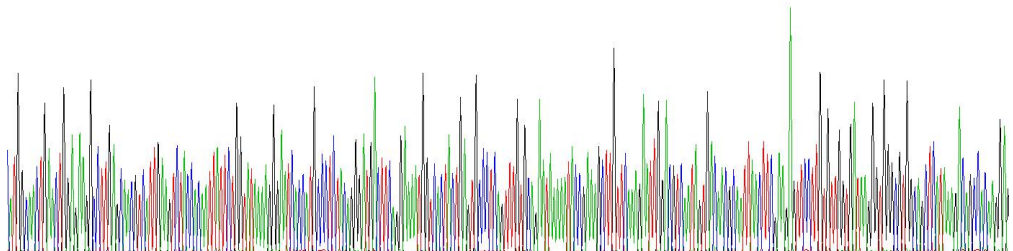
S100 calcium-binding protein A8 (S100A8) also known as calgranulin A, is a member of the S100 family of proteins containing 2 EF-hand calcium-binding motifs. S100 proteins are localized in the cytoplasm and/or nucleus of a wide range of cells, and involved in the regulation of a number of cellular processes such as cell cycle progression and differentiation. Besides, S100 Calcium Binding Protein A9 (S100A9) has been identified as an interactor of S100A8, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant rat S100A8 and recombinant rat S100A9. Briefly, S100A8 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 ul were then transferred to S100A9-coated microtiter wells and incubated for 1h at 37 °C . Wells were washed with PBST and incubated for 1h with anti-NE 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 µL stop solution to the wells and read at 450/630 nm immediately. The binding activity of recombinant rat S100A8 and recombinant rat S100A9 was shown in Figure 1, the EC50 for this effect is 0.82 ug/mL.



**Figure 1.** The binding activity of recombinant rat S100A8 and recombinant rat S100A9

[ **IDENTIFICATION** ]

ATGCGACGCTGGCAKMLTGGKAGCQTGGCTTCCTCATTCGCLDSHWLGGGKQFQVYKCTDQSSRGGCTGQWHLRSCQCLGGGRTDQGTFFGCGWHLKQHHKCTGTCGANGTGGGCGWDSGALQCHHTWCTGGAGCTTCGTGGESGHWQGGGGTGGTCCGCGGGCGGCGCG  
 WATELEKALSNVIEVYHNYSGIKGNHHALYRDDFRKMYTTECFQFVQNKNTESLQKELDVNSDNAINFEEFLVLVIRVGVAAHKDSHKE



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



**Figure 3. SDS-PAGE**

**Sample: Active recombinant S100A8, Rat**

**[ 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.