

APA012Ra01 100µg
Active S100 Calcium Binding Protein (S100)
Organism Species: *Rattus norvegicus (Rat)*
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Met1~Ser94

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: 4.1

Predicted Molecular Mass: 14.2kDa

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]

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MGSELETAME TLINVFHAHS GKEGDKYKLS KKELKDLLQT ELSSFLDVQK  
DADAVDKIMK ELDENGDGEV DFQEFVVLVA ALTVACNNFF WENS
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[ACTIVITY]

Small calcium binding protein that S100 Calcium Binding Protein (S100), also known as S100 Alpha (S100A1), is a member of the S100 family of calcium-binding proteins. As with most S100 proteins, S100A1 proteins are localized in the cytoplasm and/or nucleus of a wide range of cells, and it possess a variety of intracellular and extracellular functions. They interact with multiple receptors and signal transducers to regulate pathways that govern inflammation, cell differentiation, proliferation, energy metabolism, apoptosis, calcium homeostasis, cell cytoskeleton and microbial resistance. S100 Calcium Binding Protein A4 (S100A4) is one of targets of S100A1. Thus a functional binding ELISA assay was conducted to detect the interaction of recombinant rat S100A1 and recombinant mouse S100A4. Briefly, S100A1 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to S100A4-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with PBST and incubated for 1h with anti-S100A1 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 μ L stop solution to the wells and read at 450/630 nm immediately. The binding activity of recombinant rat

S100A1 and recombinant mouse S100A4 was shown in Figure 1, the EC50 for this effect is 3.92 ug/mL.

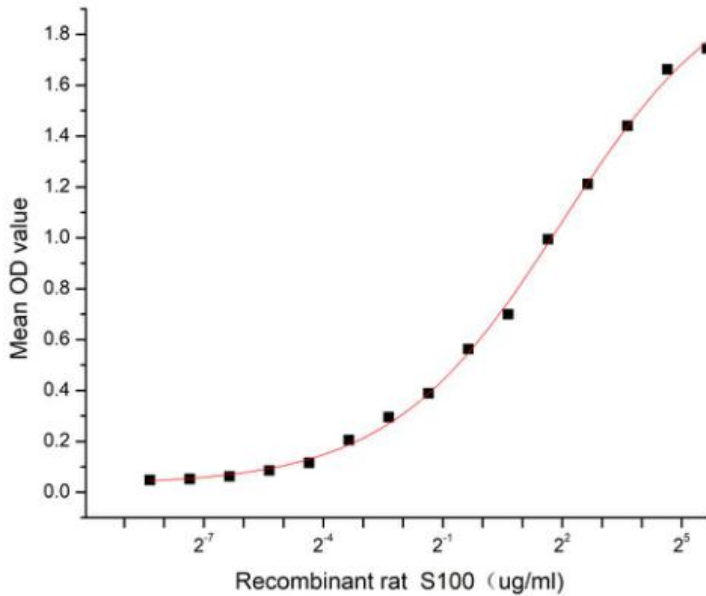


Figure 1. The binding activity of recombinant rat S100A1 and recombinant mouse S100A4

[IDENTIFICATION]

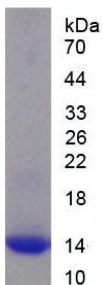


Figure 2. SDS-PAGE

Sample: Active recombinant S100, 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.