Active S100 Calcium Binding Protein (S100)

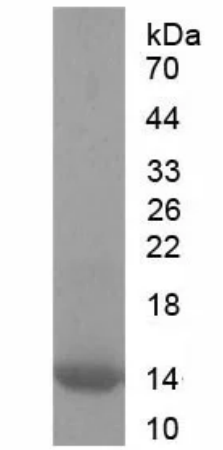
Catalog#:PER12008

概述（Summary）

别称（Alternative Names）	S100-A1; S100A1; S100-Alpha; S-100 Protein; S-100 protein subunit alpha; S-100 protein alpha chain
纯度（Purity）	Greater than 90% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Met1-Ser94】
Accession #	P35467
表达宿主（Host）	E.coli
种属（Species）	Rattus norvegicus (Rat)
预测分子量（Predicted MW）	14.2 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Small calcium binding protein that plays important roles in several biological processes such as Ca(2+) homeostasis, chondrocyte biology and cardiomyocyte regulation. In response to an increase in intracellular Ca(2+) levels, binds calcium which triggers conformational changes. These changes allow interactions with specific target proteins and modulate their activity. Regulates a network in cardiomyocytes controlling sarcoplasmic reticulum Ca(2+) cycling and mitochondrial function through interaction with the ryanodine receptors RYR1 and RYR2, sarcoplasmic reticulum Ca(2+)-ATPase/ATP2A2 and mitochondrial F1-

ATPase. Facilitates diastolic Ca(2+) dissociation and myofilament mechanics in order to improve relaxation during diastole.

电泳图（SDS-PAGE image）



Greater than 90% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

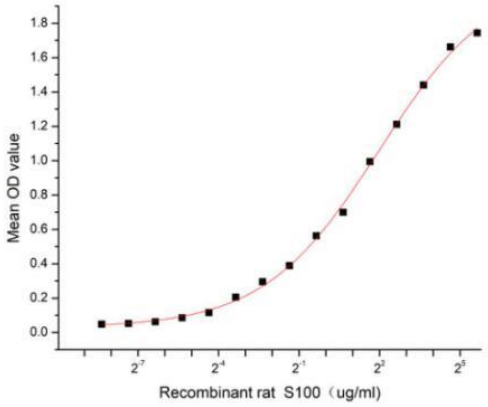


Figure 1. The binding activity of recombinant rat S100A1 and recombinant mouse S100A4

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 µl were then transferred to S100A4-coated microtiter wells and incubated for 1h at 37℃. 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℃, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 µL 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.

注意事项（Note）

For Research Use Only , Not for Diagnostic Use.