

# Active Calmodulin (CAM) Instruction Manual

## SBPA158Hu01

**Homo sapiens (Human)**

**Buffer Formulation**

20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.

**Traits**

Freeze-dried powder

**Purity**

> 90%

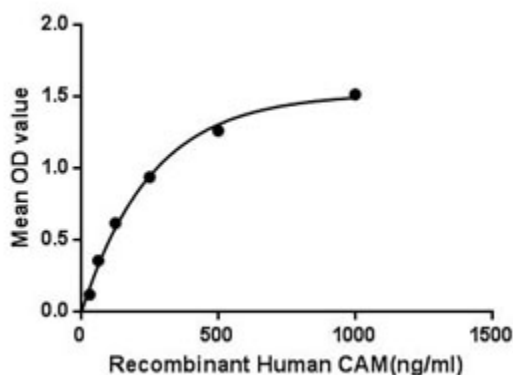
**Isoelectric Point**

4.5

**Applications**

Cell culture; Activity Assays.

### ACTIVITY TEST



Calmodulin (CAM) is the archetype of the family of calcium-modulated (calmodulin) proteins of which nearly 20 members have been found. Its functions include roles in growth and the cell cycle as well as in signal transduction and the synthesis and release of neurotransmitters. Calmodulin mediates the control of a large number of enzymes, ion channels, aquaporins and other proteins through calcium-binding. Among the enzymes to be stimulated by the calmodulin-calcium complex are a number of protein kinases and phosphatases. Besides, Myosin IC (MYO1C) has been identified as an interactor of CAM, thus a binding ELISA assay was conducted to detect the interaction of recombinant human CAM and recombinant human MYO1C. Briefly, CAM were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 $\mu$ L were then transferred to MYO1C-coated microtiter wells and incubated for 2h at 37 $^{\circ}$ C. Wells were washed with PBST and incubated for 1h with anti-CAMpAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 $^{\circ}$ C. Finally, add 50 $\mu$ L stop solution to the wells and read at 450nm

immediately. The binding activity of CAM and MYO1C was shown in Figure 1, and this effect was in a dose dependent manner.  
Figure. The binding activity of CAM with MYO1C.

## **USAGE**

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL.  
Do not vortex.

## **STORAGE**

Avoid repeated freeze/thaw cycles. Store at 2-8°C for one month. Aliquot and store at -80°C for 12 months.

## **STABILITY**

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.

## **Image**

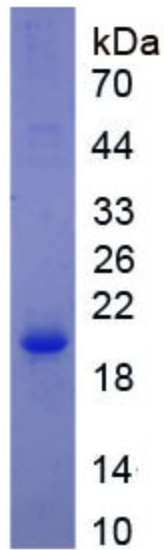


Figure. SDS-PAGE

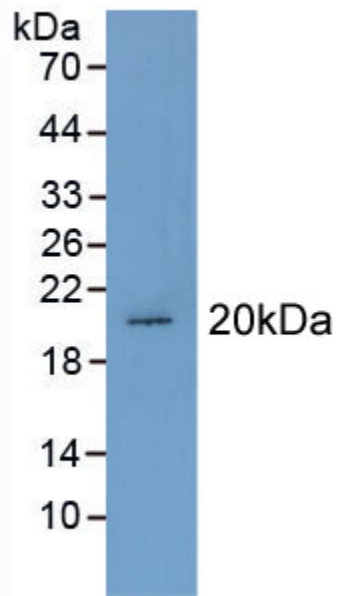


Figure. Western Blot

**[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.

