

**APB971Hu02 100µg**

**Active Protein S (PROS)**

**Organism Species: *Homo sapiens* (Human)**

***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:** Lys481~Pro667

**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:** 5.5

**Predicted Molecular Mass:** 21.7kDa

**Accurate Molecular Mass:** 21kDa 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 ]**

KGSYYPGSGIAQFHIDYNNVSSAEGWHVNVTLNIRPSTGTGVMLALVSGNNTVPFAVSLVDSTS  
EKSQDILLSVENTVIYRIQALSLCSDQQSHLEFRVNRNNLELSTPLKIETISHEDLQRQLAVLDKA  
MKAKVATYLGGLPDVPFSATPVNAFYNGCMEVNINGVQLDLDEAISKHNDIRAHSCP

## **[ ACTIVITY ]**

Protein S (PROS) is a vitamin K-dependent plasma protein functions as a cofactor for the anticoagulant protease, activated protein C (APC) to inhibit blood coagulation. It acts as a cofactor for activated protein C, which inactivates factors Va and VIIIa, thus reducing the risk of thrombosis. Coagulation factor VIII (F8) binds to protein S (PROS) to participate in the clotting process, regulating thrombin production and the conversion of fibrinogen to fibrin, thereby maintaining normal blood clotting function. Thus a functional ELISA assay was conducted to detect the interaction of recombinant human PROS and recombinant dog F8. Briefly, PROS was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100  $\mu$ l were then transferred to F8-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with PBST and incubated for 1h with anti-PROS 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 human PROS and recombinant dog F8 was shown in Figure 1, the EC<sub>50</sub> for this effect is 0.058ug/mL.

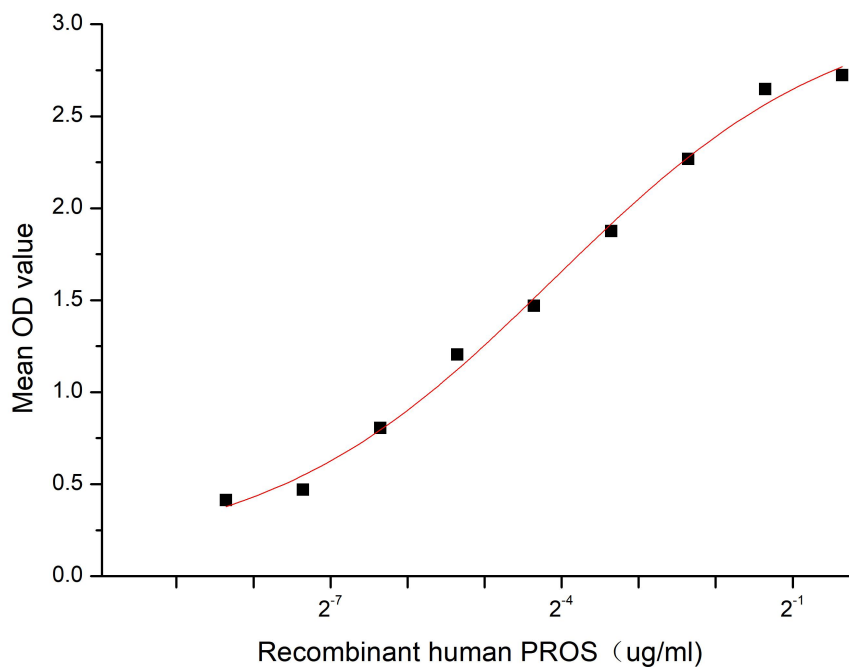


Figure 1. The binding activity of recombinant human PROS and recombinant dog F8

## [ IDENTIFICATION ]

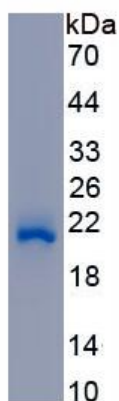


Figure 2. SDS-PAGE

Sample: Active recombinant PROS, Human

**[ 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.