

APB874Ra02 100µg
Active Coagulation Factor VII (F7)
Organism Species: Rattus norvegicus (Rat)
Instruction manual

FOR IN VITRO USE AND RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Ala315~Asp433

Tags: N-terminal His-tag

Purity: >95%

Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 5% trehalose.

Applications: Cell culture; Activity Assays.

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

Predicted isoelectric point: 6.4

Predicted Molecular Mass: 14.4kDa

Accurate Molecular Mass: 14kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) 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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ASIRFS RVSGWGQLLD RGATALELMV IEVPRLMTQD
CLEHAKHSAN TPRITENMFC AGYMDGTKDA CKGDSSGPHA THYHGTWYLT
GVVSWGEGCA AIGHIGVYTR VSQYIDWLVK YMD
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[ACTIVITY]

The main role of factor VII (FVII) is to initiate the process of coagulation in conjunction with tissue factor (TF). Tissue factor is found on the outside of blood vessels—normally not exposed to the bloodstream. Upon vessel injury, tissue factor is exposed to the blood and circulating FVII. Once bound to TF, FVII is activated to FVIIa by different proteases, among which are thrombin (factor IIa), factor Xa, IXa, XIIa, and the FVIIa-TF complex itself. Tissue Factor (TF) has been identified as an interactor of FVII, thus a binding ELISA assay was conducted to detect the interaction of recombinant rat FVII and recombinant rat TF. Briefly, FVII were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100µL were then transferred to TF-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-FVII pAb, 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°C. Finally, add 50µL stop solution to the wells and read at 450nm immediately. The binding activity of FVII and TF was shown in Figure 1, and this effect was in a dose dependent manner.

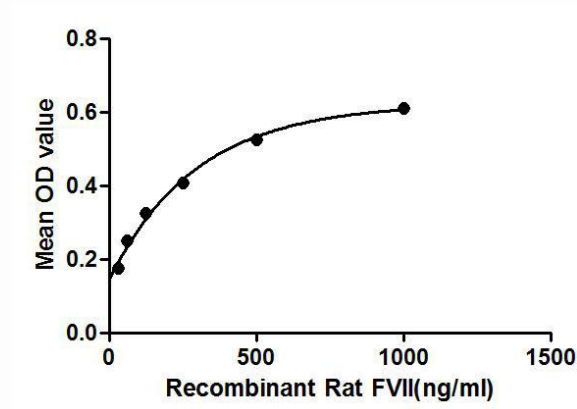


Figure 1. The binding activity of FVII with TF.

[IDENTIFICATION]

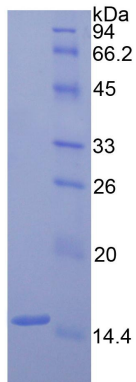


Figure 2. SDS-PAGE

Sample: Active recombinant F7, Rat

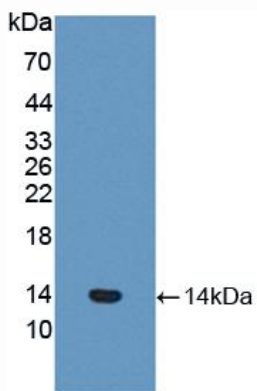


Figure 3. Western Blot

Sample: Recombinant F7, Rat;

Antibody: Rabbit Anti-Rat F7 Ab (PAB874Ra02)