APB623Mu01 200μg
Active Surfactant Associated Protein C (SPC)
Organism Species: *Mus musculus (Mouse)*
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: Phe94~Ile193
Tags: N-terminal His-tag
Purity: >98%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA 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: 6.4
Predicted Molecular Mass: 12.1kDa
Accurate Molecular Mass: 14kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in ddH_2O 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 37ºC 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]

FSIGSTG
IVVYDYQRLL TAYKPAPGTY CYIMKMAPES IPSLEAFARK LQNFRAKPST
PTSKLGQEEG HDTGSESDSS GRDLAFLGLA VSTLCGELPL YYI

[ACTIVITY]

Surfactant associated proteins (SPC), is one of the pulmonary surfactant proteins. It is a membrane protein which manufactures surfactant. The propeptide of pulmonary surfactant C has an N-terminal alpha-helical segment whose suggested function was stabilization of the protein structure, since the latter can irreversibly transform from its native alpha-helical structure to beta-sheet aggregates and form amyloid fibrils. Besides, Eukaryotic Translation Initiation Factor 2 Alpha Kinase 3 (EIF2aK3) has been identified as an interactor of SPC, thus a binding ELISA assay was conducted to detect the interaction of recombinant mouse SPC and recombinant mouse EIF2aK3. Briefly, SPC were diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to EIF2aK3-coated microtiter wells and incubated for 2h at 37℃. Wells were washed with PBST and incubated for 1h with anti-SPC 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℃. Finally, add 50μL stop solution to the wells and read at 450nm immediately. The binding activity of SPC and EIF2aK3 was shown in Figure 1, and this effect was in a dose dependent manner.

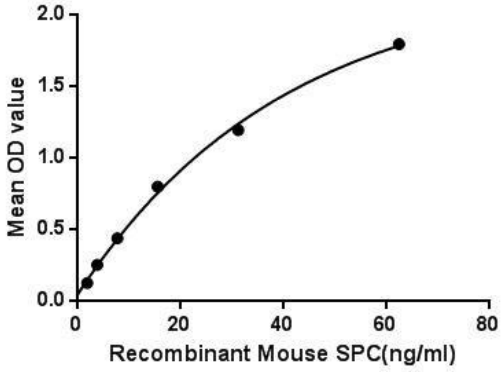

Figure 1. The binding activity of SPC with EIF2aK3.

[IDENTIFICATION]

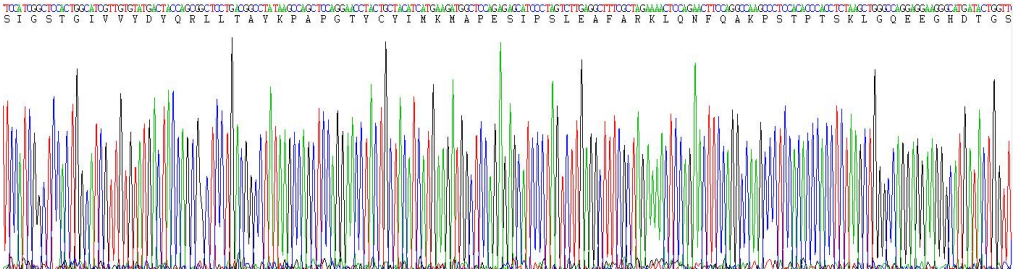

Figure 2. Gene Sequencing (extract)

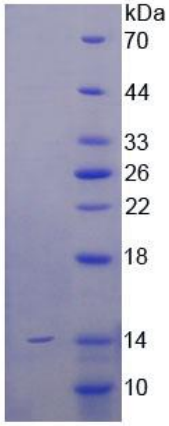

Figure 3. SDS-PAGE

Sample: Active recombinant SPC, Mouse

[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.