APG496Mu01 100μg
Active Secretoglobin Family 2A, Member 2 (SCGB2A2)
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: Asn19~Ser96
Tags: N-terminal His-tag
Purity: >80%
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: 4.1
Predicted Molecular Mass: 12.3kDa
Accurate Molecular Mass: 12kDa 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 2-8ºC for one month.
Aliquot and store at -80ºC 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]

NGTSGCGILDNIINGTISSSVSEDKYLEMVKPYILLPSTRSAVKEFKQCFLSQTEDTLSNVGLMMEI IFNSEECQQSS

[ACTIVITY]

Secretoglobin Family 2A, Member 2 (SCGB2A2) is a 93-amino-acid protein belonging to the secretoglobin superfamily. It is primarily expressed in normal breast and skin tissues and forms a secreted heterodimer with lipophilin B. SCGB2A2 is highly tissue-specific and is overexpressed in 40–80% of human breast cancers, making it a valuable biomarker for breast cancer diagnosis, early metastasis detection, and potential immunotherapy targets. Its low expression in normal mammary epithelium and elevated levels in malignancies highlight its clinical significance. Additionally, SCGB2A2 is conserved across species, including chimpanzees, dogs, and cows, indicating its evolutionary importance.Besides,Prolactin Induced Protein (PIP) has been identified as an interactor of SCGB2A2, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant mouse SCGB2A2 and recombinant human PIP . Briefly, biotin-linked SCGB2A2 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to PIP-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST 3 times and incubation with Streptavidin-HRP for 30min, then wells were aspirated and washed 5 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 recombinant mouse SCGB2A2 and

recombinant human PIP was shown in Figure 1, the EC50 for this effect is 0.021μg/mL.

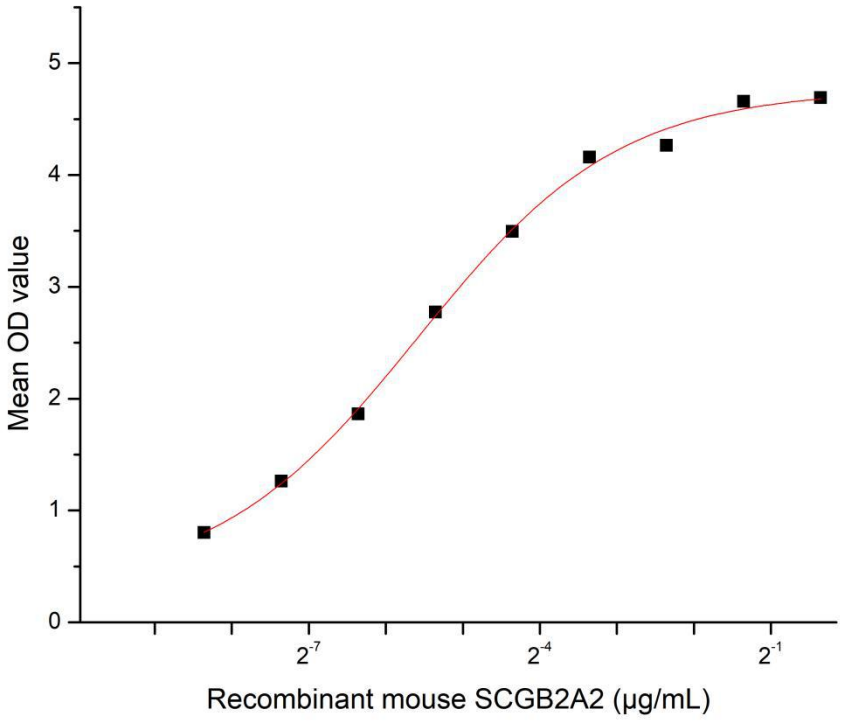

Figure 1. The binding activity of recombinant mouse SCGB2A2 and recombinant human PIP

[IDENTIFICATION]

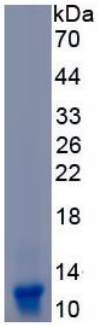

Figure 2. SDS-PAGE

Sample: Active recombinant SCGB2A2, 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.