

**APE691Hu01 100µg**  
**Active Sphingosine 1 Phosphate Lyase 1 (SGPL1)**  
**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:** Gln239~Arg493

**Tags:** N-terminal His-tag

**Purity:** >95%

**Endotoxin Level:** <1.0EU per 1µg (determined by the LAL method).

**Buffer Formulation:** PBS, pH7.4, containing 0.01% SKL, 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:** 9.4

**Predicted Molecular Mass:** 29.6kDa

**Accurate Molecular Mass:** 28kDa 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** ]

```

                                                    QS AHAAFNKAAS
YFGMKIVRVP LTKMMEVDVR AMRRAISRNT AMLVCSTPQF PHGVIDPVPE
VAKLAVKYKI PLHVDACLGG FLIVFMEKAG YPLEHPFDFR VKGVTSISAD
THKYGYAPKG SSLVLYSDKK YRNYQFFVDT DWQGGIYASP TIAGSRPGGI
SAACWAALMH FGNGYVEAT KQIIKTARFL KSELENIKGI FVFGNPQLSV
IALGSRDFDI YRLSNLMTAK GWNLNQLQFP PSIHFCITLL HAR
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## [ **ACTIVITY** ]

Sphingosine 1 Phosphate Lyase 1 (SGPL1) is an enzyme that plays a crucial role in lipid metabolism. It specifically catalyzes the cleavage of sphingosine-1-phosphate (S1P) into phosphoethanolamine and hexadecenal, regulating the levels of S1P in cells. S1P is a bioactive sphingolipid that acts as a signaling molecule, influencing various cellular processes such as cell migration, proliferation, survival, and differentiation. By modulating S1P levels, SGPL1 plays a vital role in maintaining cellular homeostasis and participating in various physiological and pathological processes. Besides, Ephrin A5 (EFNA5) has been identified as an interactor of SGPL1, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human SGPL1 and recombinant human EFNA5. Briefly, SGPL1 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100  $\mu$ l were then transferred to EFNA5-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with PBST and incubated for 1h with anti-SGPL1 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 SGPL1 and recombinant human EFNA5 was shown in Figure 1, the EC50 for this effect is 1.15µg/mL.

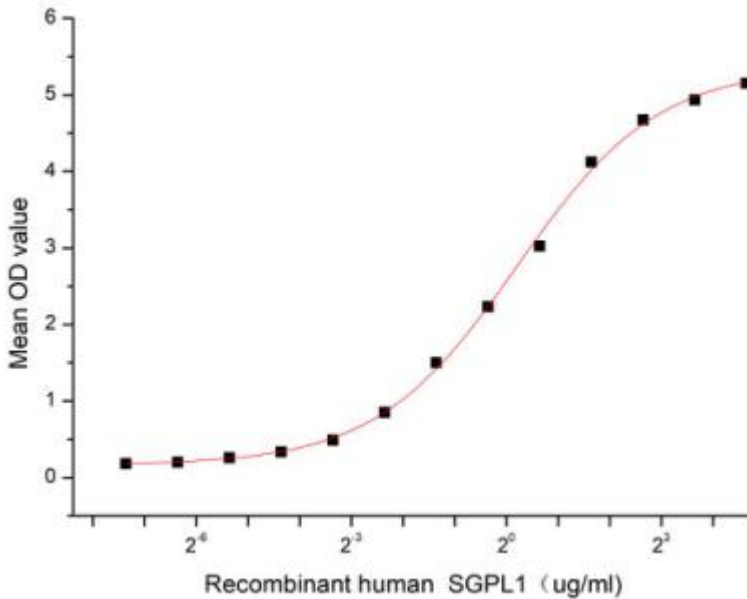


Figure 1. The binding activity of recombinant human SGPL1 and human EFNA5

## [ IDENTIFICATION ]

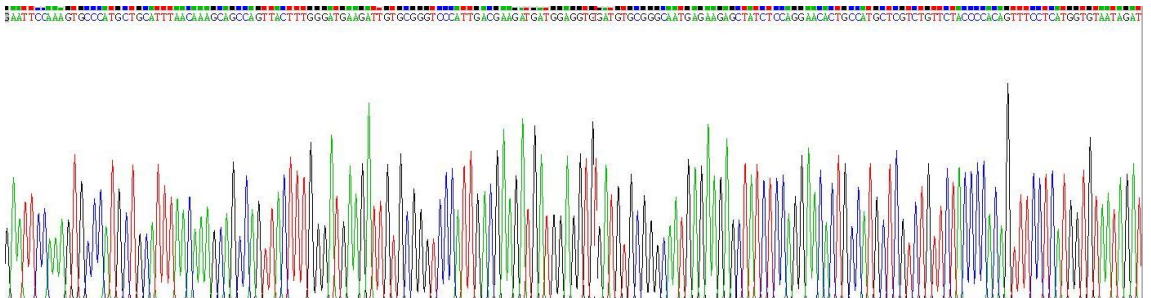
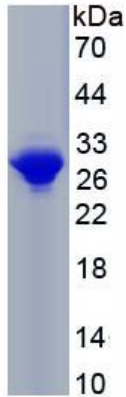


Figure 2. Gene Sequencing (extract)



**Figure 3. SDS-PAGE**

**Sample: Active recombinant SGPL1, 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.