APD851Hu01 100μg
Active Phospholipase A2 Receptor 1 (PLA2R1)
Organism Species: *Homo sapiens* (Human)
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: Tyr385~Cys643
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: 6.8
Predicted Molecular Mass: 33.6kDa
Accurate Molecular Mass: 33kDa 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]

YNRNCY KLQKEEKTWH
EALRSCQADN SALIDITSLA EVEFLVTLLG DENASETWIG LSSNKIPVSF
EWSNDSSVIF TNWHTLEPHI FPNRSQLCVS AEQSEGHWKV KNCEERLFYI
CKKAGHVLSD AESGCQEGWE RHGGFCYKID TVLRSFDQAS SGYYCPPALV
TITNRFEQAF ITSLISSVVK MKDSYFWIAL QDQNDTGEYT WKPVGQKPEP
VQYTHWNTHQ PRYSGGCVAM RGRHPLGRWE VKHCRHFKAM SLC

[ACTIVITY]

Phospholipase A2 Receptor 1 (PLA2R1) is a type I transmembrane glycoprotein belonging to the mannose receptor family. It is primarily expressed on the surface of podocytes in the kidney glomerulus and plays important roles in cell senescence, apoptosis, and maintaining glomerular filtration barrier function. PLA2R1 has gained significant clinical attention as it is identified as the major autoantigen in primary membranous nephropathy, where autoantibodies against PLA2R1 are pathogenic drivers of the disease. Besides, PLA2R1 functions as a specific receptor that binds secreted PLA2G2, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human PLA2R1 and recombinant human PLA2G2. Briefly, PLA2G2 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to PLA2R1-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-PLA2G2 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 μL stop solution to the wells and read at 450/630nm immediately. Measured by its binding

ability in a functional ELISA. When Recombinant PLA2R1 is Immobilized at 2 μg/mL(100 uLwell), the concentration of PLA2G2 that produces 50% optimal bindingresponse is found to be approximately 0.12 μg/mL.

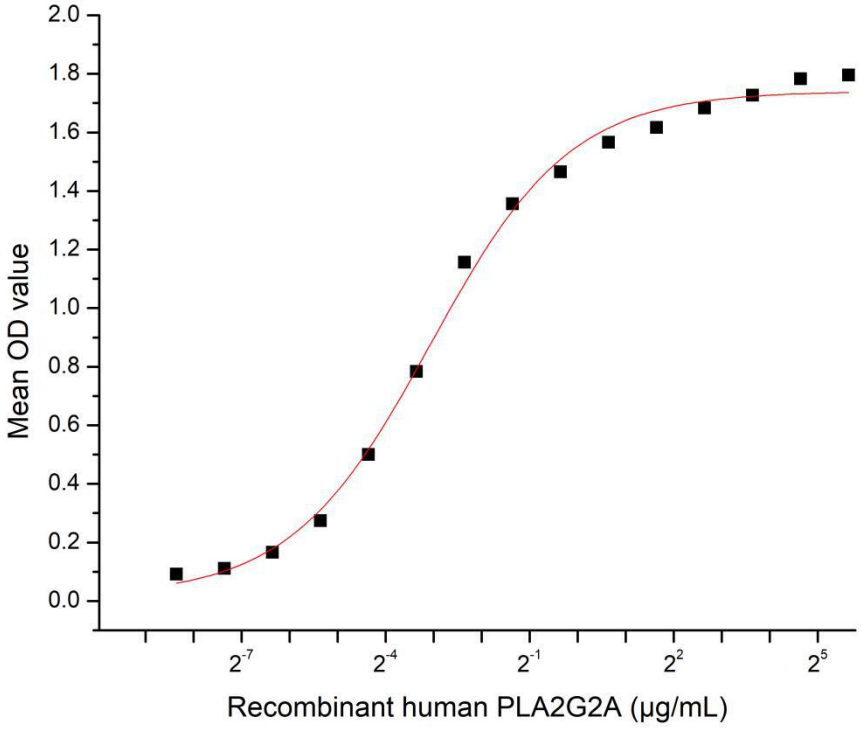

Figure 1. The binding activity of recombinant human PLA2R1 and recombinant human PLA2G2

[IDENTIFICATION]

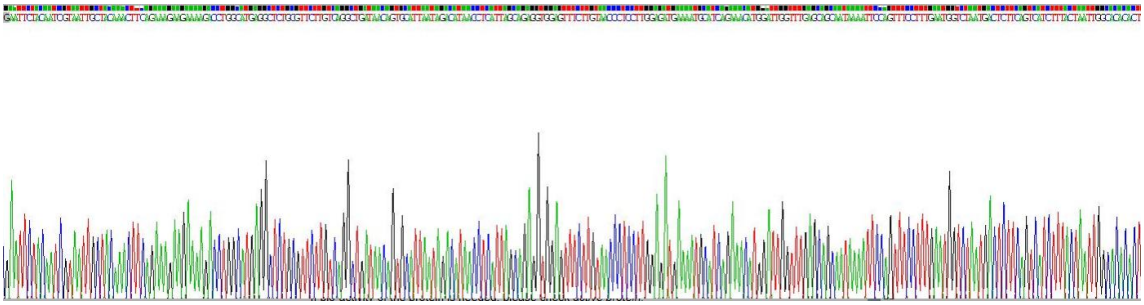

Figure 2. Gene Sequencing (extract)

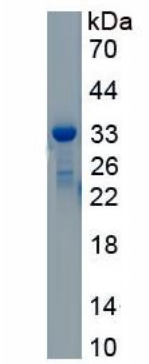

Figure 3. SDS-PAGE

Sample: Active recombinant PLA2R1, 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.