APB030Hu61 100μg
Active Protein Tyrosine Phosphatase Receptor Type C (CD45)
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: Eukaryotic expression.
Host: 293F cell
Residues: Gln26~Lys463
Tags: N-terminal His-tag
Purity: >95%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 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: 6.8
Predicted Molecular Mass: 50.6kDa
Accurate Molecular Mass: 51kDa 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]

QSPTP SPTGVSSVQT PHLPTHADSQ
TPSAGTDTQT FSGSAANAKL NPTPGSNAIS DAYLNASETT TLSPSGSAVI
STTTIATTPS KPTCDEKYAN ITVDYLYNKE TKLFTAKLNV NENVECGNNT
CTNNEVHNLT ECKNASVSIS HNSCTAPDKT LILDVPPGVE KFQLHDCTQV
EKADTTICLK WKNIETFTCD TQNITYRFQC GNMIFDNKEI KLENLEPEHE
YKCDSEILYN NHKFTNASKI IKTDFGSPGE PQIIFCRSEA AHQGVITWNP
PQRSFHNFTL CYIKETEKDC LNLDKNLIKY DLQNLKPYTK YVLSLHAYII
AKVQRNGSAA MCHFTTKSAP PSQVWNMTVS MTSDNSMHVK CRPPRDRNGP
HERYHLEVEA GNTLVRNESH KNCDFRVKDL QYSTDYTFKA YFHNGDYPGE
PFILHHSTSY NSK

[ACTIVITY]

Protein Tyrosine Phosphatase Receptor Type C (CD45) is one of the most abundant leukocyte cell surface glycoproteins and is expressed exclusively upon cells of the hematopoietic system. CD45 functions positively to regulate lymphocyte activation by servesing to dephosphorylate and activate members of the Src-tyrosine kinase family. it has been reported that SEMA4D can associate with the phosphatase CD45 at the surface of T cells and that triggering of CD45 on T cells, using monoclonal antibodies (mAb), induces shedding of SEMA4D. Thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human CD45 and recombinant human SEMA4D. Briefly, biotin-linked CD45 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 ul were then transferred to SEMA4D-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 50 µl stop solution to the wells and read at 450 nm immediately. The binding activity of CD45 and SEMA4D was shown in Figure 1, the EC50 for this effect is 6.47 ug/mL.

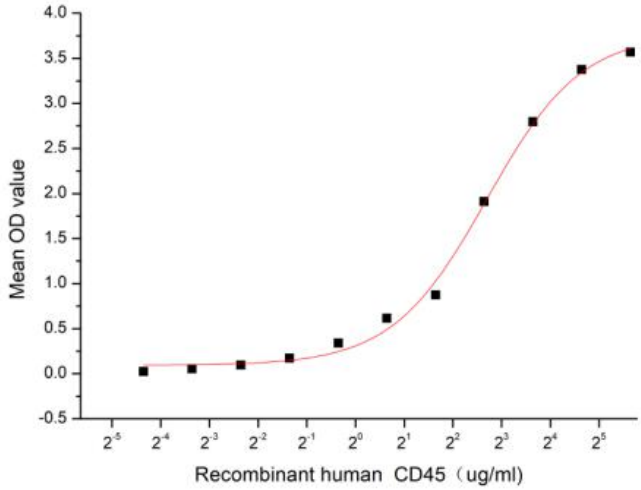

Figure 1. The binding activity of recombinant human CD45 and recombinant human SEMA4D

[IDENTIFICATION]

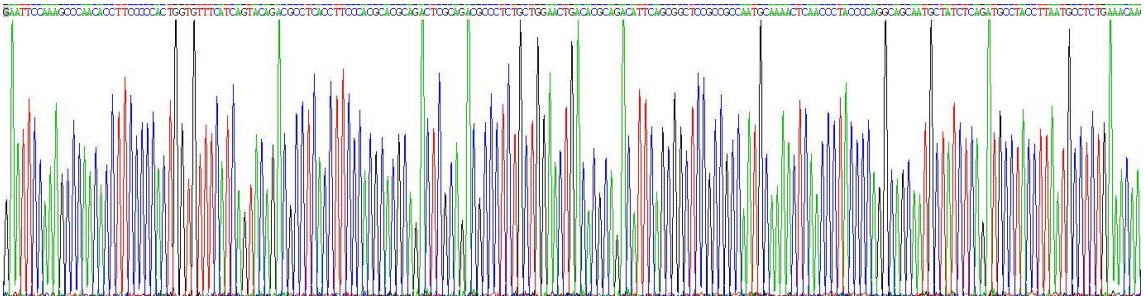

Figure 2. Gene Sequencing (extract)

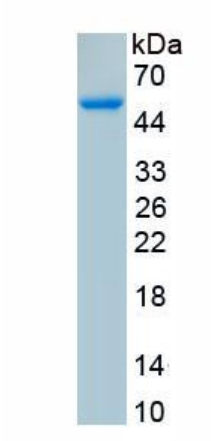

Figure 3. SDS-PAGE

Sample: Active recombinant CD45, 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.