APA781Hu01 100μg
Active Cluster Of Differentiation 276 (CD276)
Organism Species: Homo sapiens (Human)
Instruction manual

FOR IN VITRO USE AND RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1th Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.
Host: *E. coli*
Residues: Thr47~Ser219
Tags: N-terminal His-tag
Purity: >98%
Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 5% trehalose.
Applications: Cell culture; Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 5.9
Predicted Molecular Mass: 22.4kDa
Accurate Molecular Mass: 22kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) 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^{o}C for one month.
Aliquot and store at -80^{o}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]

TLCC
SFSPEPGFSL AQLNLIWQLT DTKQLVHSFA EGQDQGSAYA NRTALFPDLL
AQGNASLRLQ RVRVADEGSF TCFVSIRDFG SAAVSLQVAA PYSKPSMTLE
PNKDLRPGDT VTITCSSYQG YPEAEVFWQD GQGVPLTGNV TTSQMANEQG
LFDVHSILRV VLGANGTYS

[ACTIVITY]

Cluster Of Differentiation 276 (CD276) also known as B7-H3 in human, is a member of the B7/CD28 superfamily of costimulatory molecules serving as an accessory modulator of T-cell response. B7 proteins are immunoglobulin (Ig) superfamily members with extracellular Ig-V-like and Ig-C-like domains and short cytoplasmic domains. Among the family members, they share about 20-40% amino acid (aa) sequence identity. CD276 may play a protective role in tumor cells by inhibiting natural-killer mediated cell lysis as well as a role of marker for detection of neuroblastoma cells. It has also been found to enhance the induction of primary cytotoxic T lymphocytes and stimulate IFN-gamma production. Besides, Sialic acid-binding Ig-like lectin 12 (SIGLEC12) has been identified as an interactor of CD276, thus a binding ELISA assay was conducted to detect the interaction of recombinant human CD276 and recombinant human SIGLEC12. Briefly, CD276 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to SIGLEC12-coated microtiter wells and incubated for 2h at 37℃. Wells were washed with PBST and incubated for 1h with anti-CD276 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 CD276 and SIGLEC12 was shown in Figure 1, and this effect was in a dose dependent manner.

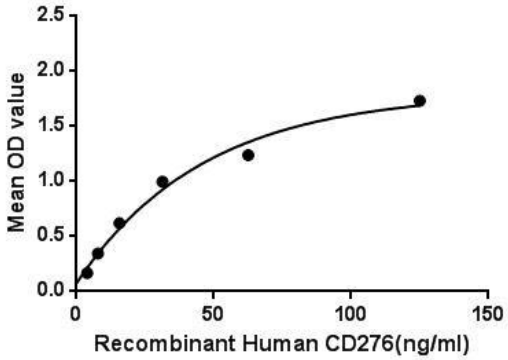

Figure 1. The binding activity of CD276 with SIGLEC12.

[IDENTIFICATION]

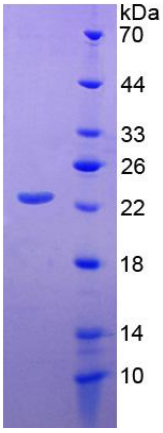

Figure 2. SDS-PAGE

Sample: Active recombinant CD276, Human

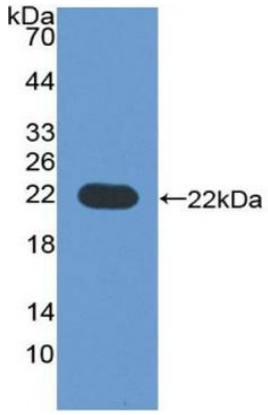

Figure 3. Western Blot

Sample: Recombinant CD276, Human;

Antibody: Rabbit Anti-Human CD276 Ab (PAA781Hu01)