APA752Mu01 100μg
Active Cluster Of Differentiation 38 (CD38)
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: Thr54~Arg301
Tags: N-terminal His-tag
Purity: >90%
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: 8.2
Predicted Molecular Mass: 32.0kDa
Accurate Molecular Mass: 29kDa 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]

TGEPTTK HFSDIFLGRC LIYTQILRPE MRDQNCQEIL STFKGAFVSK
NPCNITREDY APLVKLVTQT IPCNKTLFWS KSKHLAHQYT WIQGKMFTLE
DTLLGYIADD LRWCGDPSTS DMNYVSCPHW SENCPNNPIT VFWKVISQKF
AEDACGVVQV MLNGSLREPF YKNSTFGSVE VFSLDPNKVH KLQAWVMHDI
EGASSNACSS SSLNELKMIV QKRNMIFACV DNYRPARFLQ CVKNPEHPSC
R

[ACTIVITY]

Cluster Of Differentiation 38 (CD38), also known as cADPRH (cyclic ADP-ribose hydrolase), is a multifunctional transmembrane glycoprotein expressed in various cell types, including immune cells, endothelial cells, and hematopoietic cells. Encoded by the CD38 gene, it exhibits dual roles as an enzyme and a receptor. As an enzyme, CD38 catalyzes the metabolism of NAD+, producing second messengers like cyclic ADP-ribose (cADPR) and ADPR, which regulate calcium signaling. As a receptor, it binds to ligands such as CD31, mediating cell adhesion, migration, and immune modulation. Abnormal CD38 expression is associated with multiple diseases, including hematological malignancies, autoimmune disorders, and metabolic diseases. Its diverse functions make it a critical target for therapeutic development, particularly in cancer immunotherapy and metabolic disorder treatments.To detect the activity of recombinant CD38 , a functional ELISA assay was performed to evaluate the interaction between recombinant mouse CD38 and recombinant human SIRT1.Briefly, CD38 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to SIRT1-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-CD38 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. The binding activity of recombinant mouse CD38 and recombinant human SIRT1 was shown in Figure 1, the EC50 for this effect is 4.33259 μg/mL.

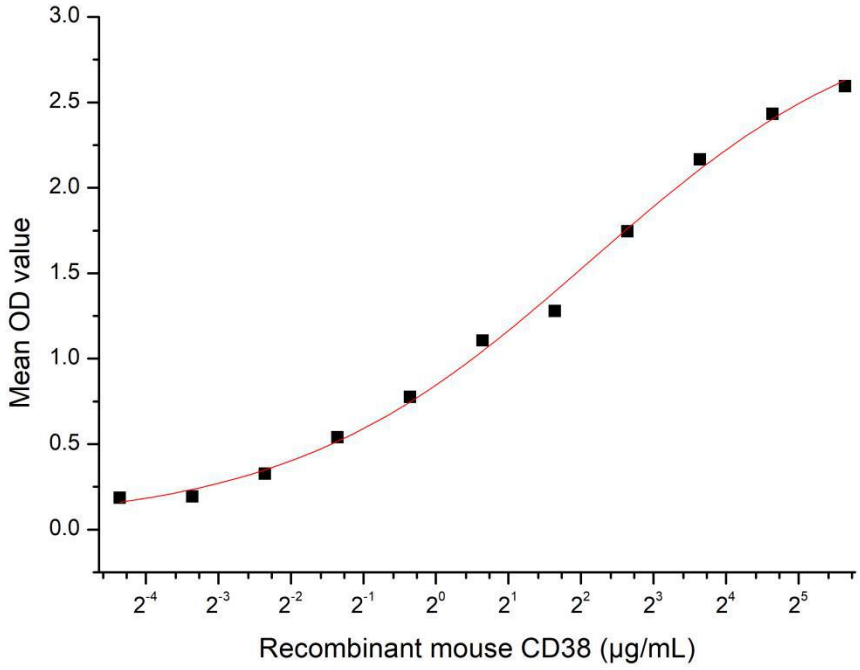


Figure 1. The binding activity of recombinant mouse CD38 and human SIRT1

[IDENTIFICATION]

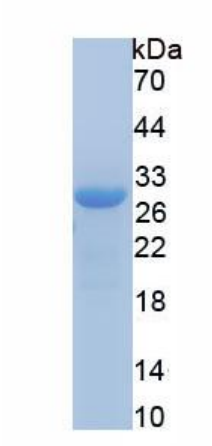


Figure 2. SDS-PAGE

Sample: Active recombinant CD38, 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.