APF570Hu01 100μg
Active Vanin 2 (VNN2)
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: Gln23~Pro329
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: 5.4
Predicted Molecular Mass: 38.3kDa
Accurate Molecular Mass: 38kDa 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]

QDSFIAAV YEHAVILPNK TETPVSQEDA
LNLMNENIDI LETAIKQAAE QGARIIVTPE DALYGWKFTR ETVFPYLEDI
PDPQVNWIPC QDPHRFGHTP VQARLSCLAK DNSIYVLANL GDKKPCNSRD
STCPPNGYFQ YNTNVVYNTE GKLVARYHKY HLYSEPQFNV PEKPELVTFN
TAFGRFGIFT CFDIFFYDPG VTLVKDFHVD TILFPTAWMN VLPLLTAIEF
HSAWAMGMGV NLLVANTHHV SLNMTGSGIY APNGPKVYHY DMKTELGKLL
LSEVDSHPLS SLAYPTAVNW NAYATTIKP

[ACTIVITY]

Vanin-2 (VNN2) is a glycosylphosphatidylinositol (GPI)-anchored ectoenzyme that plays crucial roles in inflammation and oxidative stress responses. As a member of the vanin family, it exhibits pantetheinase activity, converting pantetheine into cysteamine and pantothenic acid (vitamin B5). VNN2 is highly expressed in immune cells, particularly neutrophils, where it modulates cellular adhesion and migration during inflammatory processes. Recent studies highlight its involvement in neutrophil recruitment to inflammatory sites and its potential as a biomarker for various inflammatory diseases. The enzyme's activity influences glutathione metabolism, thereby regulating redox homeostasis in immune responses.Besides,VNN2 directly binds to Integrin Beta 2 (CD18) on leukocytes, facilitating their adhesion and transendothelial migration during inflammation.Thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human VNN2 and recombinant human CD18. Briefly, VNN2 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to CD18-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-VNN2 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 human VNN2 and recombinant human CD18 was shown in Figure 1, the EC50 for this effect is 0.009μg/mL.

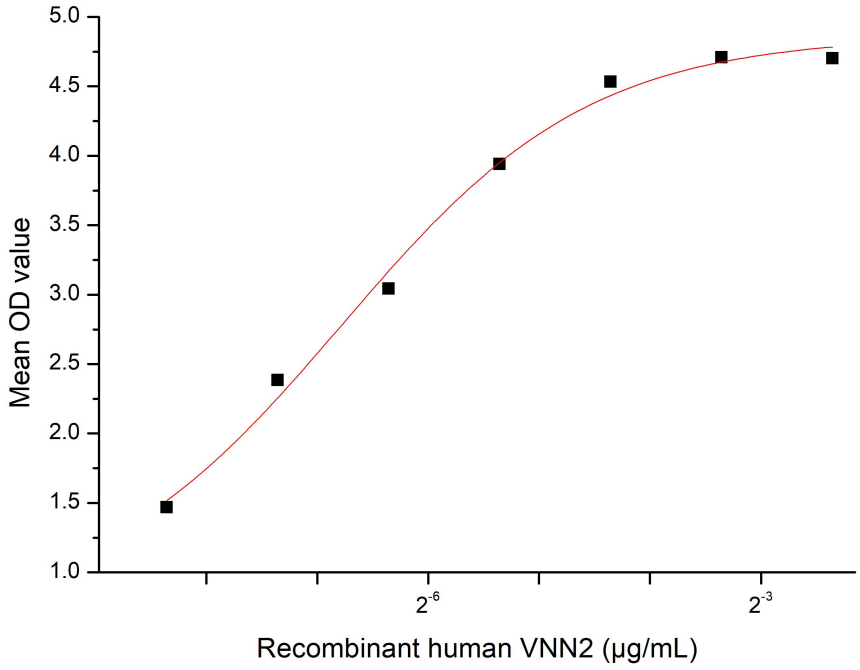

Figure 1. The binding activity of recombinant human VNN2 and recombinant human CD18

[IDENTIFICATION]

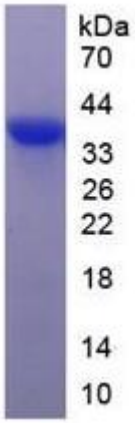

Figure 2. SDS-PAGE

Sample: Active recombinant VNN2, 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.