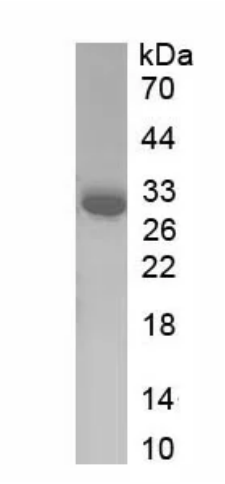
Active Vascular Cell Adhesion Molecule 1 (VCAM1)

Catalog#:PHH12394

概述（Summary）

别称（Alternative Names）	CD106; INCAM-100; L1CAM
纯度（Purity）	Greater than 90% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Gln109-Ser318】
Accession #	P19320
表达宿主（Host）	293F
种属（Species）	Homo sapiens (Human)
预测分子量（Predicted MW）	25.0 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Important in cell-cell recognition. Appears to function in leukocyte-endothelial cell adhesion. Interacts with integrin alpha-4/beta-1 (ITGA4/ITGB1) on leukocytes, and mediates both adhesion and signal transduction. The VCAM1/ITGA4/ITGB1 interaction may play a pathophysiologic role both in immune responses and in leukocyte emigration to sites of inflammation.

电泳图（SDS-PAGE image）



Greater than 90% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

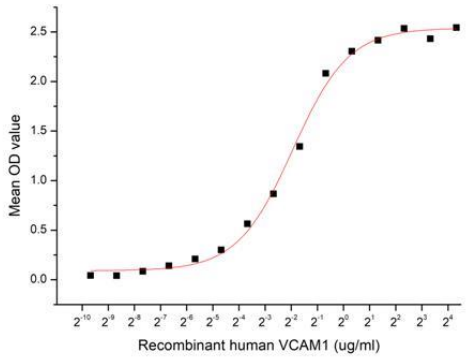
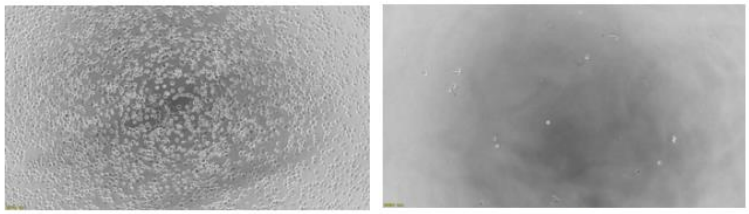


Figure 1. The binding activity of recombinant human VCAM-1 and recombinant human ITGa4

Vascular cell adhesion protein 1 (VCAM-1) is a cell adhesion molecule and a member of the immunoglobulin superfamily. Alternatively spliced forms are known to occur, but the most common form is a type I transmembrane protein with a 674 amino acid extracellular segment that includes seven C2-type immunoglobulin domains. VCAM-1 is expressed by activated endothelial cells and certain other cell types including macrophages, dendritic cells, neurons, smooth muscle cells, fibroblasts, and oocytes. Besides, Integrin Alpha 4 (ITGa4) has been identified as an interactor of VCAM-1, thus a binding ELISA assay was conducted to detect the interaction of recombinant human VCAM-1 and recombinant human ITGa4. Briefly, biotin-linked VCAM-1 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to ITGa4-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 450nm immediately. The binding activity of recombinant human VCAM-1 and recombinant human ITGa4 was shown in Figure 1, the EC50 for this effect is 0.261 ug/mL. As VCAM1 has the function of cell adhesion, we measure the activity of VCAM1 by the ability of the immobilized protein to support the adhesion of U937 human histiocytic lymphoma cells. When 5 x 104 cells/well are added to recombinat human VCAM1 coated plates (2.5 µg/mL with 100 µL/well), approximately 80-90% will adhere after 3 hour incubation at 37℃. The adhesion of U937 after 3 hour incubation at 37℃ observed by inverted microscope was shown in Figure 2.



A B

Figure 2. The adhesion of U937 supported by recombinant human VCAM1

(A) U937 cultured in recombinat human VCAM1 coated plates (10 μg/mL with 100 μL/well);

(B) U937 cultured in without-protein coated plates.

注意事项（Note）

For Research Use Only , Not for Diagnostic Use.