

Anti-VCAM1 Antibody Picoband®

Catalog Number: A01199-2

About Vcam1

CD106 (cluster of differentiation 106) also known as vascular cell adhesion molecule 1 (VCAM-1), is a protein that in humans is encoded by the VCAM1 gene. In inflammatory conditions and in cardiac allografts undergoing rejection, VCAM1 is upregulated in endothelium of postcapillary venules. Arterial expression of VCAM1 is also found in experimental models of atherosclerosis in the rabbit. This gene is mapped to chromosome 1 by Southern analysis of somatic cell hybrids. VCAM-1 functions as a cell adhesion molecule. The VCAM-1 protein mediates the adhesion of lymphocytes, monocytes, eosinophils, and basophils to vascularendothelium. It also functions in leukocyte-endothelial cell signal transduction, and it may play a role in the development of atherosclerosis and rheumatoid arthritis. CAM741 works similar to cotransin in that it represses the biosynthesis of VCAM1 cells by blocking the process of cotranslational translocation, which is dependent on the signal peptide of VCAM1. Among the lung metastasis signature genes identified, several, including VCAM1, were functionally validated.

Overview

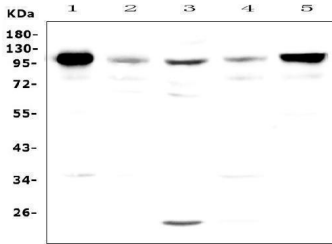
Product Name	Anti-VCAM1 Antibody Picoband®
Reactive Species	Mouse, Rat
Description	Boster Bio Anti-VCAM1 Antibody Picoband® catalog # A01199-2. Tested in ELISA, IHC, WB applications. This antibody reacts with Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	ELISA, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P29534

Technical Details

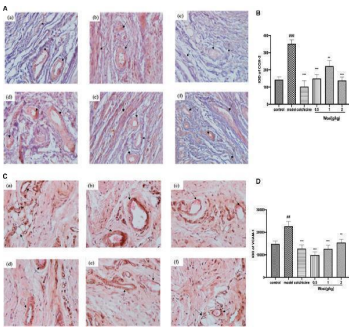
Immunogen	E. coli-derived rat VCAM1 recombinant protein (Position: F25-L270).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized

Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml ELISA, 0.1-0.5ug/ml

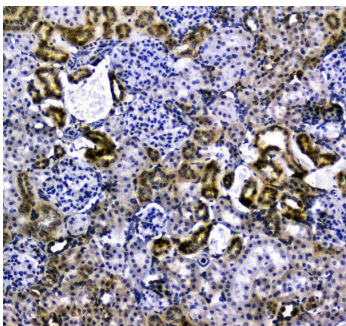
Anti-VCAM1 Antibody Picoband® (A01199-2) Images



Western blot analysis of VCAM1 using anti-VCAM1 antibody (A01199-2). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: rat spleen tissue lysates, Lane 2: rat thymus tissue lysates, Lane 3: rat testis tissue lysates, Lane 4: rat kidney tissue lysates, Lane 5: rat lung tissue lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-VCAM1 antigen affinity purified polyclonal antibody (Catalog # A01199-2) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for VCAM1 at approximately 110KD. The expected band size for VCAM1 is at 81KD.

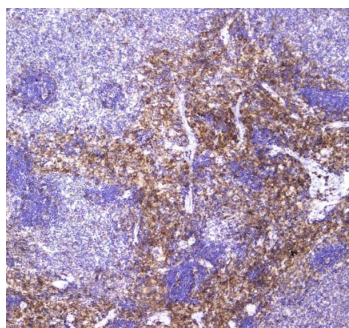


Effect of Wosi and colchicine treatment on the level of (A) COX-2 and (C) VCAM-1 proteins were detected by immunohistochemistry (IHC). Representative photomicrographs of staining ($\times 20$) demonstrating the synovial tissue sections from ankle joints of experiments rats. Treatment of groups are as follow: (a) control group; (b) model group; (c) colchicine group (0.2 mg/kg); (d) Wosi group (0.5 g/kg); (e) Wosi group (1 g/kg); (f) Wosi group (2 g/kg). The integrated optical density (IOD) of COX-2 (B) and VCAM-1 (D) IHC-stained materials were analyzed utilizing the Image pro plus 7.0 software. IOD = optical intensity of positive cells \times area of positive cells. The value was expressed as mean \pm SEM for ten animals. ###p < 0.001 vs. control group; **p < 0.01; ***p < 0.001 vs. model group. Index in PubMed under a CC BY license. PMID: 33442381

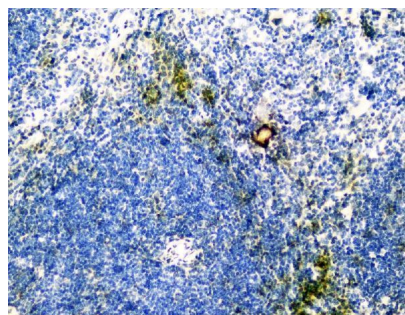


IHC analysis of VCAM1 using anti-VCAM1 antibody (A01199-2). VCAM1 was detected in paraffin-embedded section of rat kidney tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-VCAM1 Antibody (A01199-2) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

IHC analysis of VCAM1 using anti-VCAM1 antibody



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IHC analysis of VCAM1 using anti-VCAM1 antibody (A01199-2). VCAM1 was detected in paraffin-embedded section of mouse spleen tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-VCAM1 Antibody (A01199-2) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

12 Publications Citing This Product

1. PubMed ID: 10.1159/000358235, The Neurovascular Protective Effects of Huperzine A on D-Galactose-Induced Inflammatory Damage in the Rat Hippocampus
2. PubMed ID: 10.1007/s10549-016-3696-0, High-density lipoprotein of patients with breast cancer complicated with type 2 diabetes mellitus promotes cancer cells adhesion to vascular endothelium via ICAM-1 and VCAM-1 upregulation
3. PubMed ID: 10.1016/j.ijbiomac.2021.02.062, Characterization of a novel polysaccharide from Moutan Cortex and its ameliorative effect on AGEs-induced diabetic nephropathy

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Anti-VCAM1 Antibody

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