

CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	VCAM-1, Human, clone 1G11B1		
Catalog number	HM4006-20UG		
Lot number	-	Expiry date	-
Volume	200 µl	Amount	20 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA	Concentration	100 µg/ml
Host Species	Mouse IgG1	Conjugate	None
Endotoxin	<24 EU/mg	Purification	Protein G
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #	3,4			5	1,2		1	
Yes	•		•	•	•		•	
No								
N.D.		•				•		•

N.D.= Not Determined; IHC = Immunohistochemistry; F = Frozen sections; P = Paraffin sections; IF = Immunofluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50.

- F: Cryostatic sections were fixed in acetone, and incubated with mAb at 10µg/ml in PBS/0.1% tween20
- FC: 1µg mAb per 1x10⁵ cells
- FS: Stimulated EC were preincubated for 30' at 37°C with mAb and then used in adhesion assay with T-cells
- IP: precleared EC lysates were immunoprecipitated with mAb and analyzed by 7.5% SDS-PAGE under reducing conditions
- Positive control: activated endothelial cells

General Information

Description The monoclonal antibody 1G11B1 recognizes vascular cell adhesion molecule-1 (VCAM-1). VCAM-1 is a member of the immunoglobulin superfamily of adhesion molecules, which includes ICAMs, PECAM-s and MADCAM, and is involved in leukocyte-endothelial cell interactions. The immunoglobulin superfamily is a type I transmembrane protein characterized by extracellular immunoglobulin domains, a transmembrane region and a cytoplasmic tail. They are essential for the development of the embryo and for immune and inflammatory responses. These transmembrane glycoproteins mediate cell interaction with, and adhesion to, other cells and the extracellular matrix. VCAM-1 contains six immunoglobulin domains of the H-type and interacts with VLA-4 expressed on leukocytes. Multiple adhesion molecules play a role in leukocyte recruitment. The process of migration of a leukocyte through the vascular endothelium consists of the following steps: leukocyte-endothelium interaction (first tethering and rolling and then adhesion) and transendothelial migration. VCAM-1 is almost not expressed under physiological conditions. However, under appropriate pro-inflammatory conditions where the endothelium is exposed to inflammatory cytokines such as tumour necrosis factor- α or IL-1 β and becomes activated, VCAM-1 gene expression is rapid elevated by the vascular endothelium. There is also a soluble form of VCAM-1 which is angiogenic and chemotactic for endothelial cells. sVCAM-1 is up-regulated in several disease states (eg, myocardial infarction, type 2 diabetes mellitus, primary antiphospholipid syndrome, and rheumatoid arthritis).

Immunogen Full length protein

Aliases CD106, INCAM-100, L1CAM, MGC99561; DKFZp779G2333

- References**
1. Thornhill, M et al; Tumor necrosis factor combines with IL-4 or IFN-gamma to selectively enhance endothelial cells adhesiveness for T cells. The contribution of vascular cell adhesion molecule-1-dependent and -independent binding mechanisms. J Immunology 1991, 146: 592
 2. Van der Vieren, M. et al; The Leukocyte Integrin alpha4beta2 binds VCAM-1: Evidence for a binding interface between I domain and VCAM-1. J Immunol 1999, 163:1984
 3. Dienst, A et al; Specific occlusion of murine and human tumor vasculature by VCAM-1-Targeted recombinant fusion protein. J Natl Cancer Inst 2005, 97:733
 4. Wijbrandt, C et al; The clinical response to infliximab in rheumatoid arthritis is in part dependent on pretreatment tumour necrosis factor α expression in the synovium. Ann Rheum Dis 2008, 67:1139
 5. Roussel, L et al; IL-17 Promotes p38 MAPK-dependent endothelial activation enhancing neutrophil recruitment to sites of inflammation. J Immunol. 2010, 184:4531

Storage&stability Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.

Precautions For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result from the use or derivation of this product.

We hereby certify that the above-stated information is correct and that this product has been successfully tested by the Quality Control Department. This product was released for sale according to the existing specifications. This document has been produced electronically and is valid without a signature.

Approved by Manager of QC
Brenda Teunissen

Date
13/01/2021

Do you have any questions or comments regarding this product? Please contact us via support@hycultbiotech.com.