

**PN A07482 CD146**

(TEA1/34)

Liquid, 1 mL

0.2 mg

For Research Use Only. Not For Use In Diagnostic Procedures

**SPECIFICITY**

The CD146 molecule, also known as S-Endo, Muc 18, and MCAM or melanoma cell adhesion molecule (Mel-CAM) is a single chain transmembrane glycoprotein with a molecular weight of 118 kDa and it belongs to the Immunoglobulin superfamily (IgS) (1). The extracellular structure consists of five Ig-like domains: three C2-type Ig-like domains proximal to the cellular membrane and two V-type Ig-like domains distal to the cellular membrane.

CD146 is constitutively expressed in the whole human endothelium, and is also observed on other cell types such as melanoma cells, smooth muscle cells, intermediate trophoblast. Among peripheral whole blood leucocytes, CD146 expression is not detected, except on a subset of activated T-lymphocytes (1, 2).

The CD146 antigen is related to cell adhesion molecules of the IgS family and its presence is concentrated at region of cell-cell contact confirming a role in adhesion and particularly in maintenance of monolayer integrity (3).

The TEA1/34 monoclonal antibody was assigned to the CD146 cluster of differentiation during the 6<sup>th</sup> Human Leucocytes Differentiation Antigen International workshop, held in Kobe, Japan, in 1996 (WS Code: E077, Section E) (1).

**REAGENT**

Unconjugated antibody CD146  
PN A07482 - 0.2 mg - Liquid

**CLONE**

TEA1/34

**HYBRIDOMA**

SP2/0 x Balb/c

**IMMUOGEN**

HUVECs

**Ig CHAIN**

IgG2a

**SPECIES**

Mouse

**SOURCE**

Ascites fluid

**PURIFICATION**

Ion exchange or affinity chromatography

**APPLICATION**

Indirect Flow Cytometry; Immunohistochemistry on frozen section; Immunocytochemistry; cell-isolation.

**STATEMENT OF WARNINGS**

1. This reagent contains 0.1% sodium azide. Sodium azide under acid conditions yields hydrazoic acid, an extremely toxic compound. Azide compounds should be flushed with running water while being discarded. These precautions are recommended to avoid deposits in metal piping in which

explosive conditions can develop. If skin or eye contact occurs, wash excessively with water.

2. Specimens, samples and all material coming in contact with them should be handled as if capable of transmitting infection and disposed of with proper precautions.
3. Never pipet by mouth and avoid contact of samples with skin and mucous membranes.
4. Do not use reagent beyond the expiration date on the vial label.
5. Minimize exposure of reagent to light during storage or incubation.
6. Avoid microbial contamination of reagent or erroneous results may occur.
7. Use Good Laboratory Practices (GLP) when handling this reagent.

**STORAGE CONDITIONS AND STABILITY**

This purified liquid form should be stored at 2 - 8°C until the expiration date stated on the vial label. 0.1% sodium azide (w/v) has been added to the solution as preservative.

**EXAMPLE DATA**

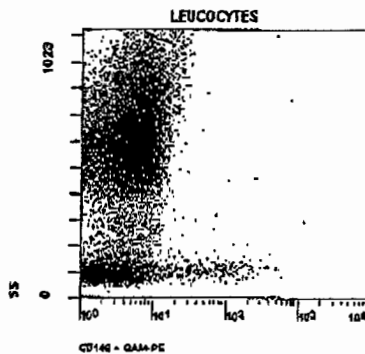


Figure 1: biparametric representation (Side Scatter vs. Fluorescence Intensity) of a lysed whole blood sample (5 x 10<sup>5</sup> cells in one test, or per 100 µL whole blood) from a healthy donor. Staining is with CD146 (20 µL of 1/16 diluted solution) monoclonal antibody (PN A07482) for 15 minutes, washed, then incubated for 10 minutes with 20 µL of a Goat Anti-Mouse-PE (PN IM0855) diluted to 1/100. All leucocytes are shown. Erythrocytes lysis is performed with VersaLyse Solution (PN IM3648) and IOTest 3 Fixative Solution (PN IM3515).

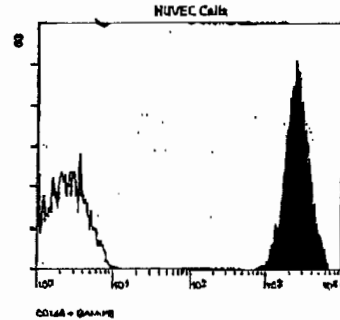


Figure 2: monoparametric representation (Count vs. Fluorescence Intensity) of HUVECs stained with CD146 (20 µL of 1/16 diluted solution) monoclonal antibody (PN A07482) or isotypic control (mouse IgG2a, PN IM0572) for 15 minutes, washed, then incubated for 10 minutes with 20 µL of a Goat Anti-Mouse-PE (PN IM0855) diluted to 1/100. Isotypic Control labeling is shown in light.

Acquisition are performed with a COULTER® EPICS® XL™ flow cytometer equipped with System II™ software. Analysis are performed with EXPO™ 32 software.

**SELECTED RESEARCH REFERENCES**

1. [5797] F., Dignat-George, N., Bardin, C., Buckley, V., Combes, D., Figarella-Branger, V., Francés, M., Herlyn, J.P., Johnson, H., Lepidi, M., Mutin, J.P., Newton, W.F., Pickl, M., Schneemann, D., Sommons, J., Simoni, and J. Sampol, "CD146 (S-ENDO/Muc 18) Workshop Panel Report", 1997, Leucocyte Typing VI, T. Kishimoto et al., Eds., Garland Publishing, Inc., New York & London 755-759.
2. [5826] W., F., Pickl, O., Majdic, G.F., Fisher, P., Petzelbauer, I., Faß, M., Wadlavicek, J., Stöckl, C., Scheinecker, T., Vidicki, H., Aschauer, J., P., Johnson, W., Knapp, 1997, "MUC18/MCAM(CD146), an activation antigen of human T lymphocytes.", The Journal of Immunology, 158, 2107-2115.
3. [5787] N., Bardin, F., Anfoso, J.M., Massé, E., Cramer, F., Sabatier, A., Le Bivic, J., Sampol, and F., Dignat-George, "Identification of CD146 as a component of the endothelial junction involved in the control of cell-cell cohesion.", 2001, Blood, 98, 13, 3677-3683.
4. [5827] I.M., Shih, "The role of CD146 (Mel-CAM) in biology and pathology". 1999, J. Pathol., 189, 4-11.
5. [5789] F., Dignat-George, J., Sampol, 2000, "Circulating endothelial cells in vascular disorders: new insights into an old concept", Eur. J. Haematol, 65, 215-220.

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