

DESCRIPTION

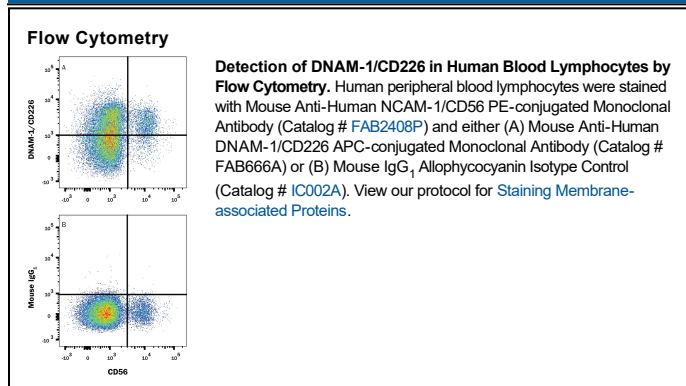
| | |
|---------------------------|--|
| Species Reactivity | Human |
| Specificity | Detects human DNAM-1/CD226 in direct ELISAs and Western blots. |
| Source | Monoclonal Mouse IgG ₁ Clone # 102511 |
| Purification | Protein A or G purified from ascites |
| Immunogen | Mouse myeloma cell line NS0-derived recombinant human DNAM-1/CD226 Glu19-Asn247 (predicted) Accession # Q15762 |
| Conjugate | Allophycocyanin Excitation Wavelength: 620-650 nm Emission Wavelength: 660-670 nm |
| Formulation | Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

| | Recommended Concentration | Sample |
|-----------------------|----------------------------------|---------------|
| Flow Cytometry | 10 μ L/10 ⁶ cells | See Below |

DATA



PREPARATION AND STORAGE

| | |
|--------------------------------|--|
| Shipping | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| Stability & Storage | Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied. |

BACKGROUND

DNAM-1 Accessory Molecule-1 (DNAM-1), also known as CD226, is a 65 kDa type I transmembrane glycoprotein in the immunoglobulin superfamily (1). Mature human DNAM-1 contains a 236 amino acid (aa) extracellular domain (ECD) with two Ig-like C2-set domains and a 61 aa cytoplasmic region that contains motifs for binding PDZ domains and band 4.1 family proteins (1, 2). Within the ECD, human DNAM-1 shares 50% and 52% aa sequence identity with mouse and rat DNAM-1, respectively. DNAM-1 is expressed on multiple lymphoid and myeloid cells and interacts with CD155/PVR and Nectin-2/CD112 (3, 4). Ligation of DNAM-1 promotes the activation of NK cells, CD8⁺ T cells, and mast cells (2-6), dendritic cell maturation, megakaryocyte and activated platelet adhesion to vascular endothelial cells, and monocyte extravasation; it inhibits the formation of osteoclasts (7-10). Platelet-endothelium interactions mediated by DNAM-1 enable the metastasis of tumor cells to the lung (11). In activated, but not in resting NK, T, and mast cells, the *cis* association of DNAM-1 with CD18 contributes to the tyrosine and serine phosphorylation of DNAM-1 during activation (6, 9, 12-14).

References:

1. Fuchs, A. and M. Colonna (2006) *Semin. Cancer Biol.* **16**:359.
2. Shibuya, A. *et al.* (1996) *Immunity* **4**:573.
3. Bottino, C. *et al.* (2003) *J. Exp. Med.* **198**:557.
4. Tahara-Hanaoka, S. *et al.* (2004) *Int. Immunol.* **16**:533.
5. Dardalhon, V. *et al.* (2005) *J. Immunol.* **175**:1558.
6. Bachelet, I. *et al.* (2006) *J. Biol. Chem.* **281**:27190.
7. Reymond, N. *et al.* (2004) *J. Exp. Med.* **199**:1331.
8. Kakehi, S. *et al.* (2007) *Mol. Cell. Biochem.* **301**:209.
9. Kojima, H. *et al.* (2003) *J. Biol. Chem.* **278**:36748.
10. Tahara-Hanaoka, S. *et al.* (2006) *Blood* **107**:1491.
11. Morimoto, K. *et al.* (2007) *Oncogene* July 16 epub.
12. Shibuya, K. *et al.* (1999) *Immunity* **11**:615.
13. Shibuya, K. *et al.* (2003) *J. Exp. Med.* **198**:1829.
14. Shibuya, A. *et al.* (1998) *J. Immunol.* **166**:1671.