Human CRTAM APC-conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 210213

Catalog Number: FAB16951A

100 TESTS

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CRTAM in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant mouse CRTAM is observed.
Source	Monoclonal Mouse IgG_{2B} Clone # 210213
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human CRTAM Ser18-Ser286 Accession # O95727
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.

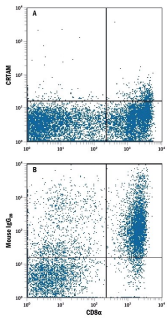
APPLICATIONS

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 µL/10^6 cells	See Below

DATA

Flow Cytometry



Detection of CRTAM in Human PBMCs by Flow Cytometry. Human peripheral blood mononuclear cells (PBMCs) either (A) untreated or (B) treated with PMA and Calcium Ionomycin for 24 hours were stained with Mouse Anti-Human CRTAM APC-conjugated Monoclonal Antibody (Catalog # FAB16951A) and Mouse Anti-Human CD8α PE-conjugated Monoclonal Antibody (Catalog # FAB1509P). Quadrant markers were set based on control antibody staining (Catalog # IC0041A). View our protocol for Staining Membrane-associated Proteins.

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.** ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

CRTAM (Class I-restricted T cell-associated molecule) is a nectin family member of the immunoglobulin superfamily that is expressed by activated $CD8^+$ and NK T cells (1–4). NK activation receptor engagement, but not cytokines, also induce NK CRTAM expression (4, 5). CRTAM is found in spleen, thymus, small intestine, peripheral blood, and surprisingly, in brain where it is highly expressed by Purkinje cells of the cerebellum (1, 2). Human CRTAM is a 393 amino acid (aa), 80 kDa type I transmembrane glycoprotein with a 17 aa signal sequence, a 269 aa extracellular domain (ECD), a 21 aa transmembrane segment and an 84 aa cytoplasmic domain. The ECD has one V-type and one C1-type Ig-like domain, while the cytoplasmic region shows a potential class I PDZ domain (1–5). Human CRTAM ECD shows 70%, 43% and 63% aa identity with mouse, rat and canine CRTAM ECD, respectively, but 73–78% aa identity within the Ig-like domains. The V-type Ig-like domain mediates interaction with the corresponding domain on another nectin family member, IGSF4 (also called TSLC-1, Necl-2, Syncam or SgIGSF) (4, 5). CRTAM is a homodimer on the cell surface but does not show homotypic binding *in trans* (3–5). The high affinity of CRTAM/IGSF4 adhesion allows CRTAM to disrupt IGSF4 homotypic interactions (3–5). IGSF4 and T cell receptor co-engagement of CRTAM-expressing $CD8^+$ cells induces increased IFN-γ or IL-22 production (3, 4). A role in cancer surveillance through NK cell-mediated rejection of IGSF4-expressing tumors has been proposed (3–5). IGSF4 is expressed broadly, including on epithelia, neurons, a subset of tonsillar B cells (4, 5), and a rare splenic T zone-restricted BCDA3+ dendritic cell population which interacts with CRTAM (3).

References:

1. Kennedy, J. *et al.* (2000) J. Leukoc. Biol. **67**:725.
2. Patino-Lopez, G. *et al.* (2006) J. Neuroimmunol. **171**:145.
3. Galibert, L. *et al.* (2005) J. Biol. Chem. **280**:21955.
4. Boles, K. S. *et al.* (2005) Blood **106**:779.
5. Arase, N. *et al.* (2005) Int. Immunol. **17**:1227.