Human CD30/TNFRSF8
Alexa Fluor® 405-conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 81337

Catalog Number: FAB229V

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CD30/TNFRSF8 in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant mouse CD30, recombinant human (rh) CD27, and rhCD40 is observed.
Source	Monoclonal Mouse IgG_{2B} Clone # 81337
Purification	Protein A or G purified from ascites
Immunogen	*S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant human CD30/TNFRSF8 Phe19-Lys379 Accession # P28908
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2 mg/mL 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	0.25-1 µg/10^6 cells	Jurkat human acute T cell leukemia cell line

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

CD30, also known as Ki-1 antigen and TNFRSF8, is a 120 kDa type I transmembrane glycoprotein belonging to the TNF receptor superfamily (1, 2). Mature human CD30 consists of a 361 amino acid (aa) extracellular domain (ECD) with six cysteine-rich repeats, a 28 aa transmembrane segment, and a 188 aa cytoplasmic domain (3). In contrast, mouse and rat CD30 lack 90 aa of the ECD and contain only three cysteine-rich repeats. Within common regions of the ECD, human CD30 shares 53% and 49% aa sequence identity with mouse and rat CD30, respectively. Alternate splicing of human CD30 generates an isoform that includes only the C-terminal 132 aa of the cytoplasmic domain. CD30 is normally expressed on antigen-stimulated Th cells and B cells (4 - 6). However, it is upregulated in Hodgkin's disease (on Reed-Sternberg cells), other lymphomas, chronic inflammation, and autoimmunity (7). CD30 binds to CD30 Ligand/TNFSF8 which is expressed on activated Th cells, monocytes, granulocytes and medullary thymic epithelial cells (1, 5). CD30 signaling costimulates antigen-induced Th0 and Th2 proliferation and cytokine secretion but favors a Th2-biased immune response (8). In the absence of antigenic stimulation, it can still induce T cell expression of IL-13 (9). CD30 contributes to thymic negative selection by inducing the apoptotic cell death of CD4+CD8+ T cells (10, 11). In B cells, CD30 ligation promotes cellular proliferation and antibody production in addition to the expression of CXCR4, CCL3, and CCL5 (5, 12). An 85-90 kDa soluble form of CD30 is shed from the cell surface by TACE-mediated cleavage (13, 14). Soluble CD30 retains the ability to bind CD30 Ligand and functions as an inhibitor of normal CD30 signaling (15).

References:

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