Human CD30 Ligand/TNFSF8 Antibody

Monoclonal Mouse IgG_{2B} Clone # 116614

Catalog Number: MAB1028

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CD30 Ligand/TNFSF8 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) CD27 Ligand, recombinant mouse CD30 Ligand, or rhCD40 Ligand is observed.
Source	Monoclonal Mouse IgG_{2B} Clone # 116614
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human CD30 Ligand/TNFSF8 Gln63-Asp234 Accession # P32971
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

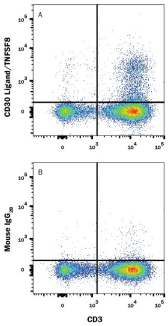
APPLICATIONS

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 µg/10^6 cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	
Neutralization	Measured by its ability to neutralize CD30 Ligand/TNFSF8-induced IL−6 secretion in the HDLM human Hodgkin's lymphoma cell line. The Neutralization Dose (ND_{50}) is typically 1-4 µg/mL in the presence of 1 µg/mL Recombinant Human CD30 Ligand/TNFSF8 and 10 µg/mL of a cross-linking antibody, Mouse polyHistidine Monoclonal Antibody.	

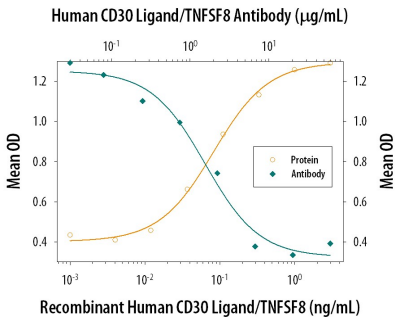
DATA

Flow Cytometry



Detection of CD30 Ligand/TNFSF8 in Human PBMCs by Flow Cytometry. Human peripheral blood mononuclear cells (PBMCs) treated with 50 ng/mL PMA and 200 ng/mL Calcium Ionomycin overnight were stained with Mouse Anti-Human CD3ε APC-conjugated Monoclonal Antibody (Catalog # FAB100A) and either (A) Mouse Anti-Human CD30 Ligand/TNFSF8 Monoclonal Antibody (Catalog # MAB1028) or (B) Mouse IgG_{2B} Isotype Control (Catalog # MAB004) followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B). View our protocol for Staining Membrane-associated Proteins.

Neutralization



IL-6 Secretion Induced by CD30 Ligand/TNFSF8 and Neutralization by Human CD30 Ligand/TNFSF8 Antibody. In the presence of a cross-linking antibody, Mouse polyHistidine Monoclonal Antibody (10 µg/mL, Catalog # MAB050), Recombinant Human CD30 Ligand/TNFSF8 (Catalog # 1028-CL) stimulates IL-6 secretion in the HDLM human Hodgkin's lymphoma cell line in a dose-dependent manner (orange line), as measured by the Human IL-6 Quantikine ELISA Kit (Catalog # D6050). Under these conditions, IL-6 secretion elicited by Recombinant Human CD30 Ligand/TNFSF8 (1 µg/mL) is neutralized (green line) by increasing concentrations of Mouse Anti-Human CD30 Ligand/TNFSF8 Monoclonal Antibody (Catalog # MAB1028). The ND_{50} is typically 1-4 µg/mL.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956

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BACKGROUND

CD30 ligand (CD30L)/TNFSF8 is a type II membrane protein belonging to the TNF superfamily. CD30L is expressed on the cell surface of activated T cells, B cells, and monocytes. The protein is also constitutively expressed on granulocytes and medullary thymic epithelial cells. The specific receptor for CD30L is CD30/TNFRSF8, a type I transmembrane glycoprotein belonging to the TNF receptor superfamily. CD30 was originally identified as a cell surface antigen of Hodgkin's and Reed-Sternberg cells using the monoclonal antibody Ki-1. CD30 is also expressed on different non-Hodgkin's lymphomas, virus-infected T and B cells, and on normal T and B cells after activation. Among T cells, CD30 is preferentially expressed on a subset of T cells producing Th2-type cytokines and on $CD4^+/CD8^+$ thymocytes that coexpress CD45RO and IL-4 receptor. CD30 ligation by CD30L mediates pleiotropic effects including cell proliferation, activation, differentiation and cell death by apoptosis. CD30 can act as a costimulatory molecule in thymic negative selection and may also play a critical role in the pathophysiology of Hodgkin's disease and other $CD30^+$ lymphomas. Human and mouse CD30 ligand cDNAs share 70% sequence homology.

References:

1. Brunangelo, F. *et al*. (1995) Blood **85**:1.
2. Gruss, H.-J. and F. Herrmann (1996) Leukemia and Lymphoma **20**:397.
3. Chiarle, R. *et al*. (1999) J. Immunol. **163**:194.

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bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956