Mouse CD48/SLAMF2 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF3327

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse CD48/SLAMF2 in ELISAs and Western blots. In sandwich immunoassays, less than 0.2% cross-reactivity with recombinant human CD48, recombinant mouse (rm) OX40, rm2B4, and rmNTB-A, and rmCD2 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse CD48/SLAMF2 Phe23-Arg216 Accession # BAE96326
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.

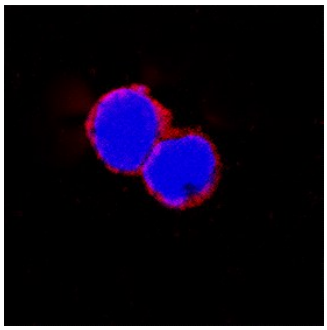
APPLICATIONS

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
Western Blot	0.1 µg/mL	Recombinant Mouse CD48/SLAMF2 (Catalog # 3327-CD)
Flow Cytometry	0.25 µg/10^6 cells	Mouse splenocytes
Immunocytochemistry	5-15 µg/mL	See Below
Mouse CD48/SLAMF2 Sandwich Immunoassay		**Reagent**
ELISA Capture	0.2-0.8 µg/mL	Mouse CD48/SLAMF2 Antibody (Catalog # AF3327)
ELISA Detection	0.1-0.4 µg/mL	Mouse CD48/SLAMF2 Biotinylated Antibody (Catalog # BAF3327)
Standard		Recombinant Mouse CD48/SLAMF2 (Catalog # 3327-CD)

DATA

Immunocytochemistry



CD48/SLAMF2 in Mouse Splenocytes. CD48/SLAMF2 was detected in immersion fixed mouse splenocytes using Goat Anti-Mouse CD48/SLAMF2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3327) at 15 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cell surfaces. View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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.

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BACKGROUND

CD48, also known as BLAST-1, BCM-1, and SLAMF2, is a 65 kDa GPI-linked protein in the CD2 family of immunoglobulin superfamily proteins (1-3). The mouse CD48 cDNA encodes a 240 amino acid (aa) precursor that includes a 22 aa signal sequence, a 195 aa mature protein that contains one Ig-like V-type domain and one Ig-like C2-type domain, and a 23 aa C-terminal propeptide (4). A soluble form of CD48 has been detected in the serum of lymphoid leukemia and arthritis patients (5). Mouse CD48 shares 51% and 68% aa sequence identity with human and rat CD48, respectively. It shares 18%-26% aa sequence identity with comparable regions of mouse 2B4, BLAME, CD2F-10, CD84, CD229, CRACC, NTB-A, and SLAM. CD48 is expressed on most lineage-committed hematopoietic cells but not on hematopoietic stem cells or multipotent hematopoietic progenitors (4, 6). Among dendritic cells (DC), CD48 is selectively expressed on circulating myeloid DC and resident bone marrow and thymus DC (7). CD2, 2B4, and heparan sulfate function as CD48 ligands (8 - 10). CD48 is competent to transduce signals and can also trigger signaling through CD2 or 2B4 (8, 11). CD48-CD2 interactions promote T cell activation and class switching to IgG_{2a} in B cells (8,12). High affinity CD48-2B4 interactions can either promote or inhibit NK cell and cytotoxic T cell (CTL) activation (7, 11, 13, 14). CD48-2B4 ligation does not directly trigger CTL activity but enhances signaling from the T cell receptor (13). CD48-2B4 mediated inhibition of NK cell activity is distinct from MHC I-restricted mechanisms (15). CD48 expressed on NK cells is coactivating, whereas CD48 expressed on other cell types inhibits NK cell activation (14). Both CD48 expressing and nonexpressing cells can be targets of NK cell or CTL-mediated lysis (13, 16).

References:

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