

## DESCRIPTION

|                                                                                                                                                                                                         |                                                                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human                                                                                                                                                    |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human CD48/SLAMF2 in direct ELISAs and Western blots. Does not cross-react with recombinant human (rh) OX-40, rhCD84, or recombinant mouse CD48. |
| <b>Source</b>                                                                                                                                                                                           | Monoclonal Mouse IgG <sub>2B</sub> Clone # 394620                                                                                                        |
| <b>Purification</b>                                                                                                                                                                                     | Protein A or G purified from hybridoma culture supernatant                                                                                               |
| <b>Immunogen</b>                                                                                                                                                                                        | Mouse myeloma cell line NS0-derived recombinant human CD48/SLAMF2<br>Gln27-Ser220<br>Accession # P09326.2                                                |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 488<br>Excitation Wavelength: 488 nm<br>Emission Wavelength: 515-545 nm                                                                      |
| <b>Formulation</b>                                                                                                                                                                                      | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide                                                                                             |
| *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.

|                            |                                                                        |
|----------------------------|------------------------------------------------------------------------|
| <b>Western Blot</b>        | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunocytochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

## 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 molecules (1-3). The human CD48 cDNA encodes a 243 amino acid (aa) precursor that includes a 26 aa signal sequence, a 194 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). Human CD48 shares approximately 50% aa sequence identity with mouse and rat CD48. It shares 20%-26% aa sequence identity with comparable regions of human CD2 family members 2B4, CD2, 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<sub>2a</sub> 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). In mouse, 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 non-expressing cells can be targets of NK cell or CTL-mediated lysis (13, 16).

## PRODUCT SPECIFIC NOTICES

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