



Product Specification Sheet

Mouse monoclonal Anti-Rat CD48 Antibodies and conjugates

<b>Cat #</b> RCD048-M	<b>Mouse</b> Anti-Rat CD48 IgG, aff pure, unlabeled	<b>SIZE:</b> 100 tests
<b>Cat #</b> RCD048-B	<b>Mouse</b> Anti-Rat CD48 IgG, biotin conjugate	<b>SIZE:</b> 100 tests
<b>Cat #</b> RCD048 -PE	<b>Mouse</b> Anti-Rat CD48 IgG-R-PE conjugate	<b>SIZE:</b> 100 tests

CD48, also known as BLAST1, BCM1, and SLAMF2, is a 65 kDa GPI-linked protein in the CD2 family of immunoglobulin superfamily proteins. 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. A soluble form of CD48 has been detected in the serum of lymphoid leukemia and arthritis patients. 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, CD2F10, CD84, CD229, CRACC, NTBA, and SLAM. CD48 is expressed on most lineage committed hematopoietic cells but not on hematopoietic stem cells or multipotent hematopoietic progenitors. 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. CD48 is competent to transduce signals and can also trigger signaling through CD2 or 2B4. CD48-CD2 interactions promote T cell activation and class switching to IgG2a in B cells. High affinity CD48-2B4 interactions can either promote or inhibit NK cell and cytotoxic T cell (CTL) activation. CD48-2B4 ligation does not directly trigger CTL activity but enhances signaling from the T cell receptor. CD48-2B4 mediated inhibition of NK cell activity is distinct from MHC-I restricted mechanisms. CD48 expressed on NK cells is coactivating, whereas CD48 expressed on other cell types inhibits NK cell activation. Both CD48 expressing and nonexpressing cells can be targets of NK cell or CTL-mediated lysis.

<b>Antigen</b>	Rat T cell blasts 9stimulated purified T- helper Cells with allogenic irradiated rat spleen cells)
<b>Ab Host/type</b>	Mouse monoclonal IgG1, clone MRC OX-45
<b>2-ab</b>	<b>Goat Anti-mouse IgG1 conjugate</b>
-ve control IgG	20102-101, mouse IgG1, purified, isotype matching -ve control

anti-rat CD45 (Blast-1) monoclonal antibody recognizes a rat cell surface glycoprotein of 45 kDa that is present on a wide variety of hematopoietic cells and on endothelial cells. The antigen is identical to the mouse BCM1 antigen. This antibody inhibits allogeneic mixed lymphocyte reactions using lymph node cells as responders and spleen cells as stimulators. CD48 has recently been identified as a ligand of the NK cell inhibitory receptor CD244. This antibody is suitable for flow cytometry.

**Form & Storage of Antibodies/Peptide Control**

**Affinity pure IgG**

100 ug/100ul solution lyophilized powder  
 Supplied in **Buffer:** PBS+no preservatives  
**Reconstitute powder** in PBS at 1mg/ml

**Cat# RCD048-B, Biotin-conjugate**

Purified antibody was coupled to Biotin using Biotinamidocaproate N-Hydroxysuccinimide Ester (BAC) at F/P ratio ~10-20:1. The antibody is supplied in PBS, pH 7.4, 0.2% BSA and 0.05% azide in either **lyophilized** or **liquid** form. Reconstitute powder in PBS in 0.5-1 ml to prepare stock solution. Store at -20oC in suitable aliquots. Stability is ~6-12 months. Do not freeze and thaw.

Suggested conjugate dilutions are 1:5,000-1:30,000 ELISA, 1:2K-1:10K for western.

**Cat# RCD048 -PE, PE-conjugate**

The purified antibody was coupled to R-Phycoerythrin (R-PE) (Molecular Weight 240,000 daltons) from seaweed using proprietary methods (A565nm/A280nm ~3-4).

Absorption: 490 nm, 545 nm and 565 nm  
 Emission Wavelength: 580 nm

The conjugate is provided in PBS, pH 7.5, containing 0.1% bovine serum albumin, (BSA) 0.05% sodium azide and stabilizing agent). **DO NOT FREEZE**. The product should be stored at 4oC and is stable for a minimum of 1 year. Do not store diluted solutions.

Recommended usage is ~5 ul/10<sup>6</sup> cells for Flow cytometry or FACS. Due to many experimental variations, optimum concn must be determined for a given applications

**General References:** Arvieux J (1986) Immunol. 58, 337-342; Wong (1990) J. Exp. Med. 171, 2115

\*This product is for in vitro research use only.

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