

Technical Data Sheet

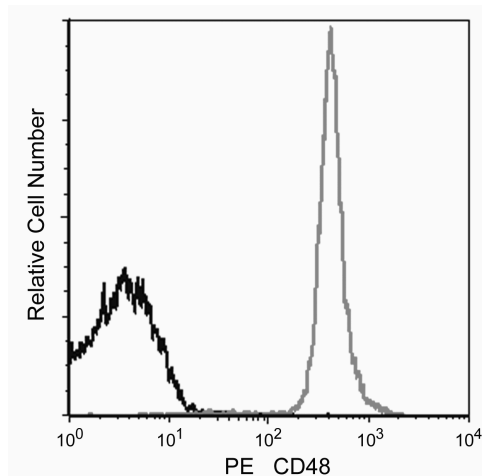
PE Hamster Anti-Mouse CD48

Product Information

Material Number:	562398
Alternate Name:	BLAST; BLAST-1; BCM1; HM48-1; MEM-102; Sgp-60; SLAMF2
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	HM48-1
Immunogen:	Mouse T lymphoma MBL-2
Isotype:	Armenian Hamster IgG1, λ3
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The HM48-1 monoclonal antibody specifically binds to CD48 (previously known as BCM1 in mice, Blast-1 in human, and OX-45 in the rat), a GPI-anchored member of the Ig superfamily. It is widely distributed on leukocytes, but not on non-hematopoietic cells, and its ligands include CD2 (LFA-2) and CD244 (2B4 antigen). The HM48-1 mAb blocks binding of soluble CD2 to CD48-bearing cells, blocks the interaction of CD2 and CD244, inhibits spleen cell proliferative responses to mitogens, augments the proliferative response of spleen cells when cross-linked with anti-CD3e mAbs, and inhibits priming of CTL in vitro. In vivo administration of HM48-1 antibody can prolong survival of cardiac allografts, an effect which is greatly enhanced by the addition of anti-CD2 mAb 12-15. This hamster mAb to a mouse leukocyte antigen does not cross-react with rat leukocytes.



Flow cytometric analysis of CD48 expression on mouse splenocytes. Splenocytes from BALB/c mice were stained with either a PE Hamster IgG1, λ1 Isotype Control (Cat. No. 554711; Left black-line histogram) or with the PE Hamster Anti-Mouse CD48 antibody (Cat. No. 557485/562398; Right gray-line histogram). The erythrocytes were lysed with BD Pharm Lyse™ Lysing Buffer (Cat. No. 555899). Flow cytometric histograms were derived from gated events with the forward and side light-scattering characteristics of viable cells. Flow cytometry was performed on a BD™ LSR II Flow Cytometry System.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

Application Notes

Application

Flow cytometry	Routinely Tested
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Suggested Companion Products

Catalog Number	Name	Size	Clone
554711	PE Hamster IgG1, λ1 Isotype Control	0.1 mg	G235-2356
554656	Stain Buffer (FBS)	500 ml	(none)
555899	Lysing Buffer	100 ml	(none)
557485	PE Hamster Anti-Mouse CD48	0.1 mg	HM48-1
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg	2.4G2

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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Although hamster immunoglobulin isotypes have not been well defined, BD Biosciences Pharmingen has grouped Armenian and Syrian hamster IgG monoclonal antibodies according to their reactivity with a panel of mouse anti-hamster IgG mAbs. A table of the hamster IgG groups, Reactivity of Mouse Anti-Hamster Ig mAbs, may be viewed at http://www.bdbiosciences.com/documents/hamster_chart_11x17.pdf.
4. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
6. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Brown MH, Boles K, van der Merwe PA, Kumar V, Mathew PA, Barclay AN. 2B4, the natural killer and T cell immunoglobulin superfamily surface protein, is a ligand for CD48. *J Exp Med.* 1998; 188(11):2083-2090. (Biology)

Kato K, Koyanagi M, Okada H, et al. CD48 is a counter-receptor for mouse CD2 and is involved in T cell activation. *J Exp Med.* 1992; 176(5):1241-1249. (Immunogen: Blocking, (Co)-stimulation, ELISA, Immunoprecipitation, Inhibition, Stimulation, Western blot)

Latchman Y, McKay PF, Reiser H. Identification of the 2B4 molecule as a counter-receptor for CD48. *J Immunol.* 1998; 161(11):5809-5812. (Biology)

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Wong YW, Williams AF, Kingsmore SF, Seldin MF. Structure, expression, and genetic linkage of the mouse BCM1 (OX45 or Blast-1) antigen. Evidence for genetic duplication giving rise to the BCM1 region on mouse chromosome 1 and the CD2/LFA3 region on mouse chromosome 3. *J Exp Med.* 1990; 171(6):2115-2130. (Biology)

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