

Technical Data Sheet

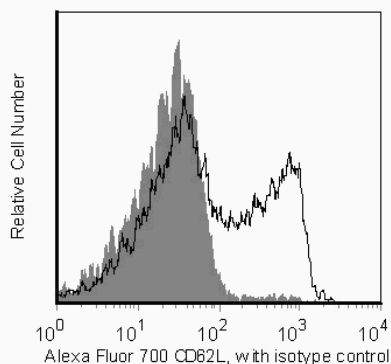
Alexa Fluor® 700 Rat Anti-Mouse CD62L

Product Information

Material Number:	560517
Alternate Name:	L-selectin, LECAM-1, Ly-22
Size:	50 µg
Concentration:	0.2 mg/ml
Clone:	MEL-14
Immunogen:	C3H/eb mouse B lymphoma 38C-13
Isotype:	Rat (F344) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing protein stabilizer and ≤0.09% sodium azide.

Description

The MEL-14 antibody reacts with CD62L (L-selectin), a 95 kDa (on neutrophils) or 74 kDa (on lymphocytes) receptor with lectin-like and Epidermal Growth Factor-like domains. In the mouse, L-selectin is detected on most thymocytes, with the highest levels of expression on an immunocompetent subset and a population of dividing progenitor cells, and on peripheral leukocytes, including subsets of B and T lymphocytes, neutrophils, monocytes, and eosinophils. This member of the selectin adhesion molecule family appears to be required for lymphocyte homing to peripheral lymph nodes and to contribute to neutrophil emigration at inflammatory sites. L-selectin is rapidly shed from lymphocytes and neutrophils upon cell activation, metalloproteinases may mediate the release of CD62L ectodomains from the cell surface. The level of CD62L expression, along with other markers, distinguishes naive, effector, and memory T cells. L-selectin binds to sialyaed oligosaccharide determinants on high endothelial venules (HEV) in peripheral lymph nodes. In vitro studies have demonstrated that CD34, GlyCAM-1, and MAdCAM-1, all recognized by mAb MECA-79 (anti-mouse PNA_D Carbohydrate Epitope, Cat. No. 553863), may be ligands for CD62L. MEL-14 mAb blocks in vitro binding of lymphocytes to peripheral lymph node HEV and inhibits in vivo lymphocyte extravasation into peripheral lymph nodes and late stages of leukocyte rolling.



Analysis of CD62L on mouse bone marrow. Bone marrow cells from C57BL/6 mice were stained with the Alexa Fluor® 700 Rat Anti-Mouse CD62L antibody (unshaded) or with a Alexa Fluor® 700 Rat IgG2a, κ isotype control (shaded). Histograms were derived from gated events based on light scattering characteristics for bone marrow. 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 to Alexa Fluor® 700 under optimum conditions, and unreacted Alexa Fluor® 700 was removed.

Application Notes

Application

Flow cytometry	Routinely Tested
----------------	------------------

Suggested Companion Products

Catalog Number	Name	Size	Clone
557963	Alexa Fluor® 700 Rat IgG2a, κ Isotype Control	0.1 mg	R35-95
553141	Purified Rat Anti-Mouse CD16/CD32 (Mouse BD Fc Block™)	0.1 mg	2.4G2

Product Notices

- Since applications vary, each investigator should titrate the reagent to obtain optimal results.

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	888.259.0187	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country-specific contact information, visit bdbiosciences.com/how_to_order/

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton Dickinson and Company is strictly prohibited.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.

BD, BD Logo and all other trademarks are the property of Becton, Dickinson and Company. ©2008 BD



2. An isotype control should be used at the same concentration as the antibody of interest.
3. Alexa Fluor® 700 has an adsorption maximum of ~700nm and a peak fluorescence emission of ~720nm. Before staining cells with this reagent, please confirm that your flow cytometer is capable of exciting the fluorochrome and discriminating the resulting fluorescence.
4. Alexa Fluor is a registered trademark of Molecular Probes, Inc., Eugene, OR.
5. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.
6. 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.
7. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
8. Please refer to www.bdbiosciences.com/pharming/en/protocols for technical protocols.

References

- Cerwenka A, Carter LL, Reome JB, Swain SL, Dutton RW. In vivo persistence of CD8 polarized T cell subsets producing type 1 or type 2 cytokines. *J Immunol.* 1998; 161(1):97-105. (Biology)
- Gallatin WM, Weissman IL, Butcher EC. A cell-surface molecule involved in organ-specific homing of lymphocytes. *Nature.* 1983; 304(5921):30-34. (Immunogen)
- Iwabuchi K, Ohgama J, Ogasawara K, et al. Distribution of MEL-14+ cells in various lymphoid tissues. *Immunobiology.* 1991; 182(2):161-173. (Biology)
- Jung TM, Gallatin WM, Weissman IL, Dailey MO. Down-regulation of homing receptors after T cell activation. *J Immunol.* 1988; 141(12):4110-4117. (Biology)
- Kishimoto TK, Jutila MA, Berg EL, Butcher EC. Neutrophil Mac-1 and MEL-14 adhesion proteins inversely regulated by chemotactic factors. *Science.* 1989; 245(4923):1238-1241. (Biology)
- Lanzavecchia A, Sallusto F. Dynamics of T lymphocyte responses: intermediates, effectors, and memory cells. *Science.* 2000; 290(5489):92-97. (Biology)
- Lewinsohn DM, Bargatze RF, Butcher EC. Leukocyte-endothelial cell recognition: evidence of a common molecular mechanism shared by neutrophils, lymphocytes, and other leukocytes. *J Immunol.* 1987; 138(12):4313-4321. (Biology)
- Ley K, Bullard DC, Arbones ML, et al. Sequential contribution of L- and P-selectin to leukocyte rolling in vivo. *J Exp Med.* 1995; 181(2):669-675. (Biology)
- Mobley JL, Dailey MO. Regulation of adhesion molecule expression by CD8 T cells in vivo. I. Differential regulation of gp90MEL-14 (LECAM-1), Pgp-1, LFA-1, and VLA-4 alpha during the differentiation of cytotoxic T lymphocytes induced by allografts. *J Immunol.* 1992; 148(8):2348-2356. (Biology)
- Peschon JJ, Slack JL, Reddy P, et al. An essential role for ectodomain shedding in mammalian development. *Science.* 1998; 282(5392):1281-1284. (Biology)
- Pizcueta P, Luscinskas FW. Monoclonal antibody blockade of L-selectin inhibits mononuclear leukocyte recruitment to inflammatory sites in vivo. *Am J Pathol.* 1994; 145(2):461-469. (Biology)
- Reichert RA, Jerabek L, Gallatin WM, Butcher EC, Weissman IL. Ontogeny of lymphocyte homing receptor expression in the mouse thymus. *J Immunol.* 1986; 136(10):3535-3542. (Biology)
- Reichert RA, Weissman IL, Butcher EC. Phenotypic analysis of thymocytes that express homing receptors for peripheral lymph nodes. *J Immunol.* 1986; 136(10):3521-3528. (Biology)
- Reichert RA, Weissman IL, Butcher EC. Dual immunofluorescence studies of cortisone-induced thymic involution: evidence for a major cortical component to cortisone-resistant thymocytes. *J Immunol.* 1986; 136(10):3529-3534. (Biology)
- Seibold F, Seibold-Schmid B, Cong Y, et al. Regional differences in L-selectin expression in murine intestinal lymphocytes. *Gastroenterology.* 1998; 114(5):965-974. (Biology)
- Shortman K, Wilson A, Van Ewijk W, Scollay R. Phenotype and localization of thymocytes expressing the homing receptor-associated antigen MEL-14: arguments for the view that most mature thymocytes are located in the medulla. *J Immunol.* 1987; 138(2):342-351. (Biology)
- Siegelman MH, Cheng IC, Weissman IL, Wakeland EK. The mouse lymph node homing receptor is identical with the lymphocyte cell surface marker Ly-22: role of the EGF domain in endothelial binding. *Cell.* 1990; 61(4):611-622. (Biology)
- Sprent J, Tough DF. Lymphocyte life-span and memory. *Science.* 1994; 265(5177):1395-1400. (Biology)
- Vestweber D. Ligand-specificity of the selectins. *J Cell Biochem.* 1996; 61(4):585-591. (Biology)
- Yang G, Mizuno MT, Hellstrom KE, Chen L. B7-negative versus B7-positive P815 tumor: differential requirements for priming of an antitumor immune response in lymph nodes. *J Immunol.* 1997; 158(2):851-858. (Biology)