

DESCRIPTION

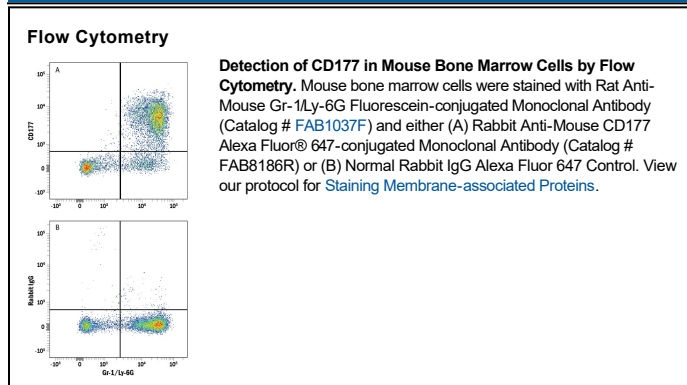
Species Reactivity	Mouse
Specificity	Detects mouse CD177 in direct ELISAs.
Source	Recombinant Monoclonal Rabbit IgG Clone # 1171A
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Human embryonic kidney cell line HEK293-derived recombinant mouse CD177 Accession # Q8R2S8
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *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.

	Recommended Concentration	Sample
Flow Cytometry	5 µL/10 ⁶ cells	See Below

DATA



PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

CD177 is a member of the uPAR/CD59/Ly6 superfamily (1). Mature mouse CD177 is a 796 amino acid (aa) protein that contains four uPAR/Ly6 domains, while human CD177 contains only two. Within common regions, mouse CD177 shares 55% and 77% aa sequence identity with human and rat CD177, respectively. CD177 is expressed on the surface of neutrophils through a glycosylphosphatidylinositol (GPI) anchor (2-4). It is nearly absent from neutrophils from paroxysmal nocturnal hemoglobinuria patients who are deficient in the ability to synthesize GPI linkages (4, 5). It is up-regulated on granulocytes from polycythemia vera and thalassemia patients (6, 7). CD177 binds to PECAM-1 on vascular endothelial cells, an interaction which mediates neutrophil adhesion to the vascular wall and neutrophil transmigration (8). It associates *in cis* with the Integrin MAC-1 (CD11b/CD18) (9). CD177 also associates *in cis* with Proteinase 3 (PR3) and is required for cell surface PR3 expression (9-11). PR3 is normally found in intracellular vesicles, but once at the cell surface it can serve as an autoimmune target for anti-neutrophil cytoplasmic antibodies (ANCA) (12). The ANCA targeting of CD177-PR3 complexes triggers neutrophil activation and vasculitis (9, 12).

References:

1. Stroncek, D.F. (2007) *Curr. Opin. Hematol.* **14**:688.
2. Skubitz, K.M. *et al.* (1991) *J. Leukoc. Biol.* **49**:163.
3. Kissel, K. *et al.* (2001) *Eur. J. Immunol.* **31**:1301.
4. Klippel, S. *et al.* (2002) *Blood* **100**:2441.
5. Boccuni, P. *et al.* (2000) *Crit. Rev. Oncol. Hematol.* **33**:25.
6. Temerinac, S. *et al.* (2000) *Blood* **95**:2569.
7. Zoi, K. *et al.* (2008) *Brit. J. Haematol.* **141**:100.
8. Sachs, U.J.H. *et al.* (2007) *J. Biol. Chem.* **282**:23603.
9. Jerke, U. *et al.* (2011) *J. Biol. Chem.* **286**:7070.
10. von Vietinghoff, S. *et al.* (2007) *Blood* **109**:4487.
11. Kuckleburg, C.J. *et al.* (2012) *J. Immunol.* **188**:2419.
12. van Timmeren, M.M. and P. Heeringa (2012) *Curr. Opin. Rheumatol.* **24**:8.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.