# **Technical Data Sheet**

## FITC Rat anti-Mouse CD172a

#### **Product Information**

Material Number: 560316

Alternate Name: SIRPα, SHPS-1, BIT

 Size:
 0.1 mg

 Concentration:
 0.5 mg/ml

 Clone:
 P84

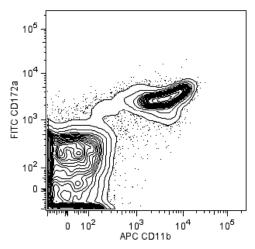
 Leature:
 Pat (SD) I

Isotype:Rat (SD) IgG1,  $\kappa$ Reactivity:QC Tested: Mouse

Storage Buffer: Aqueous buffered solution containing ≤0.09% sodium azide.

#### Description

The P84 antibody reacts with CD172a, also known as SIgnal-Regulatory Protein  $\alpha$  (SIRP $\alpha$ ), Src Homology 2 domain-containing protein tyrosine Phosphatase (SHP) Substrate 1 (SHPS-1), or Brain Immunoglobulin-like molecule with Tyrosine-based activation motifs (BIT). CD172a is an adhesion molecule of the Ig superfamily which is expressed on neurons in the central nervous system and the retina, on macrophages, and on bone-marrow myeloid cells. Its ligand, CD47, or Integrin-Associated Protein (IAP), is expressed by a wide variety of cells. CD172a and CD47 are proposed to mediate bi-directional signaling to modify neural synaptic activity and regulate the phagocytic activities of macrophages.



Flow cytometric analysis of APC-conjugated anti-mouse CD172a on mouse bone marrow. Bone marrow from BALB/c mice were stained with FITC Rat anti-Mouse CD172a and APC Rat Anti-Mouse CD11b (clone M1/70, Cat. No. 553312) and analyzed by flow cytometry. Flow cytometry was performed on a BD FACSCalibur™ System and the contour plot was derived from the gated events based on light scattering characteristics of viable bone marrow cells.

#### **Preparation and Storage**

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. The antibody was conjugated with FITC under optimum conditions, and unreacted FITC was removed. Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

### **Application Notes**

Application

Flow cytometry Routinely Tested

## Suggested Companion Products

 Catalog Number
 Name
 Size
 Clone

 553312
 APC Rat Anti-Mouse CD11b
 0.1 mg
 M1/70

## **Product Notices**

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

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- 2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
- 3. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
- 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.

#### References

Chuang W, Lagenaur CF. Central nervous system antigen P84 can serve as a substrate for neurite outgrowth. *Dev Biol.* 1990; 137(2):219-232. (Immunogen) Comu S, Weng W, Olinsky S. The murine P84 neural adhesion molecule is SHPS-1, a member of the phosphatase-binding protein family. *J Neurosci.* 1997; 17(22):8702-8710. (Biology)

Gresham HD, Dale BM, Potter JW, et al. Negative regulation of phagocytosis in murine macrophages by the Src kinase family member, Fgr. J Exp Med. 2000; 191(3):515-528. (Biology)

Jiang P, Lagenaur CF, Narayanan V. Integrin-associated protein is a ligand for the P84 neural adhesion molecule. *J Biol Chem.* 1999; 274(2):559-562. (Biology) Mi ZP, Jiang P, Weng WL, Lindberg FP, Narayanan V, Lagenaur CF. Expression of a synapse-associated membrane protein, P84/SHPS-1, and its ligand, IAP/CD47, in mouse retina. *J Comp Neurol.* 2000; 416(3):335-344. (Biology)

Oldenborg PA, Zheleznyak A, Fang YF, Lagenaur CF, Gresham HD, Lindberg FP. Role of CD47 as a marker of self on red blood cells. *Science*. 2000; 288(5473):2051-2054. (Biology)

Veillette A, Thibaudeau E, Latour S. High expression of inhibitory receptor SHPS-1 and its association with protein-tyrosine phosphatase SHP-1 in macrophages. *J Biol Chem.* 1998; 273(35):22719-22728. (Biology)

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