

Technical Data Sheet

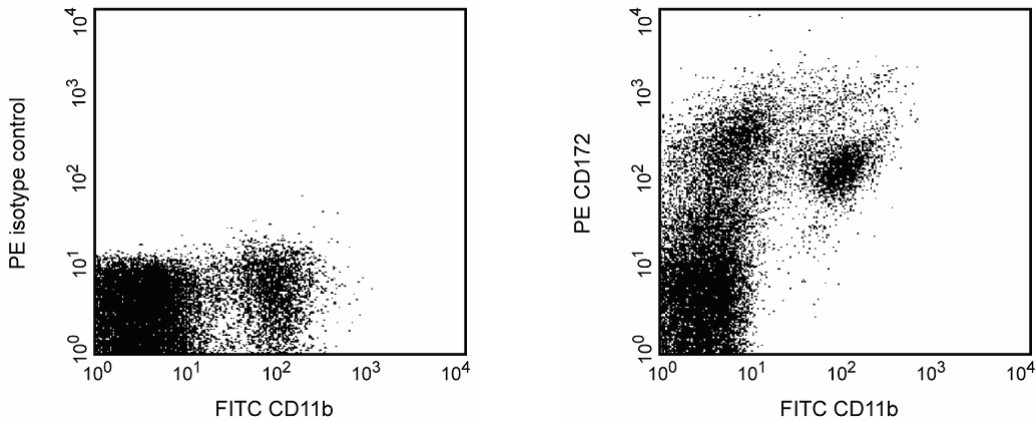
PE Mouse Anti-Rat CD172

Product Information

Material Number:	552298
Alternate Name:	SIRP
Size:	0.1 mg
Concentration:	0.2 mg/ml
Clone:	OX-41
Immunogen:	Resident peritoneal cells from cross-bred rat strains
Isotype:	Mouse IgG2a, κ
Reactivity:	QC Testing: Rat
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The OX-41 antibody reacts with the rat signal-regulatory protein (SIRP). The rat SIRP (CD172) is a 110-120-kDa type 1 transmembrane protein with three extracellular immunoglobulin superfamily domains and two intracellular *Immunoreceptor Tyrosinebased Inhibitory Motifs* (ITIM). The SIRP ITIMs are phosphorylated in response to activation by growth hormone, epidermal growth factor, and integrin-mediated cell adhesion. The phosphorylated SIRP associates with tyrosine phosphatases SHP-1 and/or SHP-2. In the rat, SIRP is selectively expressed on myeloid cells (monocytes, macrophages, granulocytes, and dendritic cells) and neurons. The ligand for rat SIRP is CD47, which is similar to the interaction of the human homolog SIRPα1 (CD172α) and human CD47. The SIRP/CD47 interaction is thought to be important in maintaining cellular adhesion and possibly promote T-cell activation.



**Immunofluorescent staining of mAb OX-41 on bone-marrow cells.** Lewis bone marrow cells were incubated simultaneously with either PE-conjugated mouse IgG2a, κ isotype control mAb G155-178 (Cat. No. 553457, left panel) or PE-conjugated mAb OX-41 (right panel) and FITC-conjugated anti-rat CD11b mAb WT.5 (Cat. No. 554982). For analysis, a gate was drawn to include viable cells only (gate not shown) as determined by propidium iodide staining. Flow cytometry was performed on a BD FACSCalibur™ flow cytometry system.

Preparation and Storage

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

Application Notes

Application

Flow cytometry	Routinely Tested
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## Suggested Companion Products

Catalog Number	Name	Size	Clone
554982	FITC Mouse Anti-Rat CD11b	0.5 mg	WT.5
553457	PE Mouse IgG2a, $\kappa$ Isotype Control	0.1 mg	G155-178

## Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to [www.bdbiosciences.com/pharmlingen/protocols](http://www.bdbiosciences.com/pharmlingen/protocols) for technical protocols.
3. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at [www.bdbiosciences.com/colors](http://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

Adams S, van der Laan LJ, Vernon-Wilson E, et al. Signal-regulatory protein is selectively expressed by myeloid and neuronal cells. *J Immunol.* 1998; 161(4):1853-1859.(Biology)

Robinson AP, White TM, Mason DW. Macrophage heterogeneity in the rat as delineated by two monoclonal antibodies MRC OX-41 and MRC OX-42, the latter recognizing complement receptor type 3. *Immunology.* 1986; 57(2):239-247.(Immunogen)

Robinson AP, White TM, Mason DW. MRC OX-43: a monoclonal antibody which reacts with all vascular endothelium in the rat except that of brain capillaries. *Immunology.* 1986; 57(2):231-237.(Immunogen)

Vernon-Wilson EF, Kee WJ, Willis AC, Barclay AN, Simmons DL, Brown MH. CD47 is a ligand for rat macrophage membrane signal regulatory protein SIRP (OX41) and human SIRPalpha 1. *Eur J Immunol.* 2000; 30(8):2130-2137.(Biology)