Technical Data Sheet

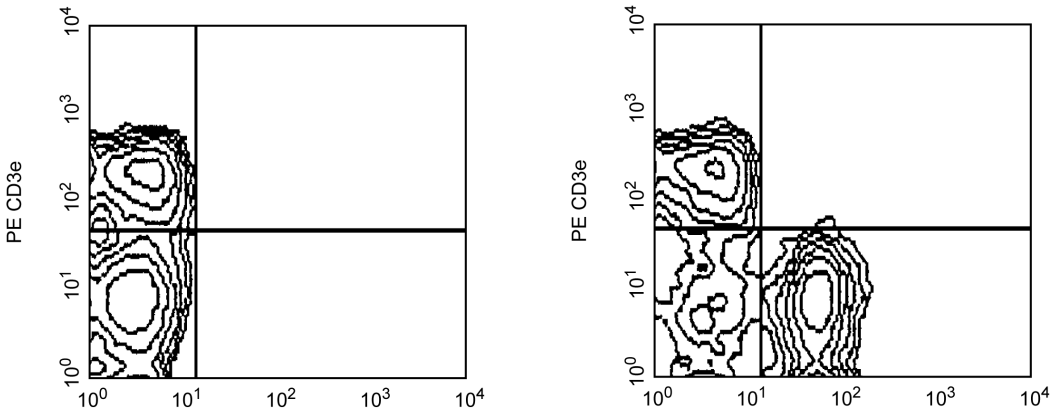
FITC Rat Anti-Mouse CD19

Product Information

Material Number:	**561740**
Size:	25 µg
Concentration:	0.5 mg/ml
Clone:	1D3
Immunogen:	Mouse CD19 Transfected Cell Line
Isotype:	Rat (LEW) IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The 1D3 antibody reacts with CD19, a B lymphocyte-lineage differentiation antigen. CD19, a 95-kDa transmembrance glycoprotein, is a member of the immunoglobulin superfamily and is expressed throughout B-lymphocyte development from the pro-B cell through the mature B-cell stages. Terminally differentiated plasma cells do not express CD19. On the surface of mature B cells, the CD19 molecule associates with CD21 (CR-2) and CD81 (TAPA-1), and this multimolecular complex synergizes with surface immunoglobulin to promote cellular activation. Studies with CD19-deficient mice have suggested that the level of CD19 expression affects the generation and maturation of B cells in the bone marrow and periphery. B-1 lineage B cells, also known as CD5+ B cells, are drastically reduced or absent in CD19-deficient mice. Increased levels of CD19 expression correlate with increased frequencies of peritonal and splenic B-1 cells and reduced numbers of conventional B lymphocytes in the periphery. CD19 participates in B-lymphocyte development, B-cell activation, maturation of memory B cells and regulation of tolerance. CD19 has also been detected on peritoneal mast cells, co-localized with CD21/CD35, and it is proposed to play a role in complement-mediated mast-cell activation.



Two-color analysis of the expression of CD19 on mouse spleen B cells. *BALB/c splenocytes were stained with PE Hamster anti-Mouse CD3e (Cat. No. 553063) in the absence (left panel) or presence (right panel) of FITC Rat anti-Mouse CD19. Flow cytometry was performed on a BD FACScan™ flow cytometry system.*

Preparation and Storage

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

The antibody was conjugated with FITC under optimum conditions, and unreacted FITC was removed.

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

Application Notes

Application

Flow cytometry	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
553929	FITC Rat IgG2a, κ Isotype Control	0.25 mg	R35-95
553063	PE Hamster Anti-Mouse CD3e	0.1 mg	145-2C11
554656	Stain Buffer (FBS)	500 ml	(none)

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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. 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.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
5. An isotype control should be used at the same concentration as the antibody of interest.

References

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Tedder TF, Zhou LJ, Engel P. The CD19/CD21 signal transduction complex of B lymphocytes. *Immunol Today.* 1994; 15(9):437-442. (Biology)