



Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

#54508 store at +4C

CD19 (1D3) Rat mAb (violetFluor™ 450 Conjugate)

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: FC-FP, FC-L	Reactivity: M	Sensitivity: Endogenous	Source/Isotype: Rat IgG2a kappa	UniProt ID: #P25918	Entrez-Gene Id: 12478
-------------------------------------	-------------------------	-----------------------------------	-------------------------------------------	-------------------------------	---------------------------------

Product Usage Information

For optimal flow cytometry results, we recommend 0.5 µg of antibody per test.

Application

Flow Cytometry (Fixed/Permeabilized)
Flow Cytometry (Live)

Dilution

1:40
1:40

Storage

Supplied in 10 mM NaH₂PO₄, 150 mM NaCl, 0.09% NaN₃, 0.1% gelatin, pH 7.2. This product is stable for 12 months when stored at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.

Specificity/Sensitivity

CD19 (1D3) Rat mAb (violetFluor™ 450 Conjugate) recognizes endogenous levels of total mouse CD19 protein. This antibody detects an epitope within the extracellular domain.

Source / Purification

This monoclonal antibody was purified from tissue culture supernatant via affinity chromatography. The purified antibody was conjugated under optimal conditions, with unreacted dye removed from the preparation.

Description

This Cell Signaling Technology antibody is conjugated to violetFluor™ 450 and tested in-house for direct flow cytometric analysis in mouse cells.

Background

CD19 is a 95 kDa coreceptor which amplifies the signaling cascade in B cells (1). On the B cell surface, CD19 associates with CD21, CD81, and Leu-13 to exert its function. The cytoplasmic tail of CD19 has nine conserved tyrosine residues playing critical roles in CD19 mediated function by coupling signaling molecules to the receptor (1). After B cell receptor or CD19 ligation, Tyr531 and Tyr500 of CD19 are progressively phosphorylated. This phosphorylation enables the coupling of PI3 kinase and Src family tyrosine kinase to CD19 and activates the PI3K and Src signaling pathways (2,3). Coligation of B cell receptor and CD19 also promotes Tyr409 phosphorylation in CD19. The phosphorylation at these sites enables its binding to Vav and mediates elevated intracellular calcium response, as well as the JNK pathway (4,5). The 1D3 clone is a widely used as a phenotypic marker for CD19 expression on the surface of murine B cells and subsets of dendritic cells.

Background References

1. Tedder, T.F. et al. (1997) *Immunity* 6, 107-18.
2. Buhl, A.M. and Cambier, J.C. (1999) *J Immunol* 162, 4438-46.
3. Fujimoto, M. et al. (2000) *Immunity* 13, 47-57.
4. O'Rourke, L.M. et al. (1998) *Immunity* 8, 635-45.
5. Sato, S. et al. (1997) *Proc Natl Acad Sci U S A* 94, 13158-62.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Applications Key

FC-FP: Flow Cytometry (Fixed/Permeabilized) **FC-L:** Flow Cytometry (Live)

Cross-Reactivity Key

M: Mouse

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.