Product Description

The 1D3 antibody reacts with mouse CD19, an ~95 kDa type 1 transmembrane glycoprotein expressed on the surface of B cells throughout all stages of development, from early pre-B cells to plasma cells. Expression is down-regulated but persists in terminally differentiated plasma cells. CD19 is also found on follicular dendritic cells. By associating with CD21 and CD81, CD19 functions as a coreceptor for the B cell receptor and is involved in B cell activation and differentiation. Activation of CD19 is accompanied by phosphorylation of the cytoplasmic domain, which promotes binding to kinases and the induction of intracellular signaling cascades. Mutations in CD19 can result in severe immunodeficiency syndromes. Clone 1D3 recognizes the same epitope as clone 6D5 in cross-competition assays.

Target Antigen Name: CD19
Alternative Names: B4
Gene ID: 12478
Species Reactivity: Mouse
Host Species: Rat (LEW)
Clonality: Monoclonal
Clone: 1D3
Isotype: IgG2a, kappa
Immunogen: Recombinant mouse CD19-transfected cell line
Conjugate: Unconjugated

Applications

Verified: FC
Reported: FA, FC, ICC, IF, IHC, IP
Special Applications: This antibody clone has been verified for purity assessments of cells isolated with EasySep™ kits, including EasySep™ Mouse B Cell Enrichment Kit (Catalog #19754).

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; RIA: Radioimmunoassay; WB: Western blotting

Properties

Formulation: Aqueous buffer containing 0.09% sodium azide, may contain carrier protein/stabilizer
Purification: The antibody was purified by column chromatography.
Stability and Storage: Product stable at 2 - 8°C when stored undiluted. Do not freeze. For product expiry date, please contact techsupport@stemcell.com.
Directions for Use: For flow cytometry the suggested use of this antibody is ≤ 0.5 µg per 1 x 10^6 cells in 100 µL volume. It is recommended that the antibody be titrated for optimal performance for each application.
Data

Flow cytometry analysis of C57BL/6 mouse splenocytes labeled with Anti-Mouse CD19 Antibody, Clone 1D3, followed by a mouse anti-rat IgG2a antibody, FITC (filled histogram), or a rat IgG2a, kappa isotype control antibody followed by a mouse anti-rat IgG2a antibody, FITC (solid line histogram).

Related Products

For a complete list of antibodies, including other conjugates, sizes and clones, as well as related products available from STEMCELL Technologies, please visit our website at www.stemcell.com/antibodies or contact us at techsupport@stemcell.com.

References

2. Chen Q et al. (2013) Retinoic acid and α-galactosylceramide regulate the expression of costimulatory receptors and transcription factors responsible for B cell activation and differentiation. Immunobiology 218(12): 1477-87. (FC, ICC, IF)
4. Ziegler AI et al. (2013) The CD19 signalling molecule is elevated in NOD mice and controls type 1 diabetes development. Diabetologia 56(12): 2659-68. (FC)

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