

# CD19 (SJ25C1): sc-18896

## BACKGROUND

CD19 is a transmembrane glycoprotein that contains two extracellular immunoglobulin-like domains. CD19 is selectively expressed on the cell surface of B lymphocytes, where it activates intracellular signaling cascades involving both Ras and phosphatidylinositol 3-kinase pathways. Activation of CD19 results in cross-linking of the membrane protein immunoglobulin chains and the subsequent association with Src family protein tyrosine kinases (PTK). Expression of CD19 is continuous throughout B cell development and through terminal differentiation of B cells into plasma cells. CD19 forms functional complexes with B lymphocyte surface proteins, including Integrin  $\beta$ 1, CD21 and CD81, which are involved in regulating B cell development.

## REFERENCES

1. Pezutto, A., et al. 1987. CD19 monoclonal antibody HD37 inhibits immunoglobulin-induced B cell activation and proliferation. *J. Immunol.* 138: 2793-2799.
2. Tedder, T.F., et al. 1989. Isolation of cDNAs encoding the CD19 antigen of human and mouse B lymphocytes. A new member of the immunoglobulin superfamily. *J. Immunol.* 143: 712-717.

## CHROMOSOMAL LOCATION

Genetic locus: CD19 (human) mapping to 16p11.2.

## SOURCE

CD19 (SJ25C1) is a mouse monoclonal antibody raised against Nalm-1 and 16 cells expressing CD19 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD19 (SJ25-C1) is available conjugated to either phycoerythrin (sc-18896 PE) or fluorescein (sc-18896 FITC), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM.

In addition, CD19 (SJ25-C1) is available conjugated to either APC (sc-18896 APC) or APC-Cy7 (sc-18896 APCC7), 100 tests in 2 ml, for IF, IHC(P) and FCM.

## APPLICATIONS

CD19 (SJ25-C1) is recommended for detection of CD19 of human origin by immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

Suitable for use as control antibody for CD19 siRNA (h): sc-29968, CD19 shRNA Plasmid (h): sc-29968-SH and CD19 shRNA (h) Lentiviral Particles: sc-29968-V.

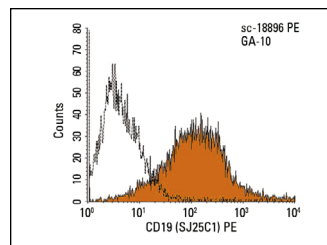
Molecular Weight of CD19: 95 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, BJAB whole cell lysate: sc-2207 or NAMALWA cell lysate: sc-2234.

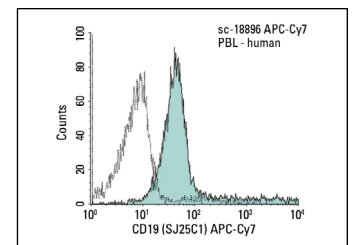
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 2) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE:sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium:sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



CD19 (SJ25C1) PE: sc-18896 PE. FCM analysis of GA-10 cells. Black line histogram represents the isotype control, normal mouse IgG<sub>1</sub>-PE: sc-2866.



CD19 (SJ25C1) APC-Cy7: sc-18896 APCC7. FCM analysis of human peripheral blood leukocytes. Black line histogram represents the isotype control, normal mouse IgG<sub>1</sub>-APC-Cy7: sc-3781.

## SELECT PRODUCT CITATIONS

1. Walton, K.A., et al. 2003. Receptors involved in the oxidized 1-palmitoyl-2-arachidonoyl-sn-glycero-3-phosphorylcholine-mediated synthesis of interleukin-8. A role for Toll-like receptor 4 and a glycosylphosphatidylinositol-anchored protein. *J. Biol. Chem.* 278: 29661-29666.
2. Alvarez-Zavala, M., et al. 2016. WNT receptors profile expression in mature blood cells and immature leukemic cells: RYK emerges as a hallmark receptor of acute leukemia. *Eur. J. Haematol.* 97: 155-165.
3. Fernandez, I.Z., et al. 2019. A novel human IL2RB mutation results in T and NK cell-driven immune dysregulation. *J. Exp. Med.* 216: 1255-1267.
4. Kim, S.Y., et al. 2020. *Mycobacterium tuberculosis* Rv2626c-derived peptide as a therapeutic agent for sepsis. *EMBO Mol. Med.* 12: e12497.
5. Lee, D., et al. 2022. Discovery of *Mycobacterium tuberculosis* Rv3364c-derived small molecules as potential therapeutic agents to target SNX9 for sepsis. *J. Med. Chem.* E-published.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.



See **CD19 (B-1): sc-390244** for CD19 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor<sup>®</sup> 488, 546, 594, 647, 680 and 790.