

Anti-Human/Mouse CD45R (B220) BG Violet 500

Catalog Number :07131-45

RUO: For Research Use Only. Not for use in diagnostic procedures.

Product Information

Clone: RA3-6B2

Format/Conjugate: BG Violet 500

Concentration: 0.2 mg/mL

Reactivity: Human, Mouse

Laser: Violet (405nm)

Peak Emission: Not Applicable

Peak Excitation: Not Applicable

Filter: Not Applicable

Brightness (1=dim,5=brightest): Not Applicable

Isotype: Rat IgG2a, kappa

Formulation: Phosphate-buffered aqueous solution, ≤0.09% Sodium azide, may contain carrier protein/stabilizer, pH7.2.

Storage: Product should be kept at 2-8°C and protected from prolonged exposure to light.

Applications: FC

Description

The RA3-6B2 monoclonal antibody specifically reacts with a 220 kDa exon A-restricted epitope on the extracellular domain of mouse CD45 glycoprotein. CD45R/B220 is expressed on all the development stages of B cells, and at a low level on plasma cells and a subset of memory B cells. Low levels of CD45R/B220 are also expressed by some activated T lymphocytes, natural killer cell progenitors in the bone marrow, lymphokine activated killer cells (LAK), T lymphocytes of lpr/lpr mutant mouse, apoptotic T cells of mice injected with bacterial superantigens, and macrophage progenitors in fetal liver.

The CD45 molecule is a member of the Protein Tyrosine Phosphatase (PTP) family, because its intracellular region contains two PTP domains. The extracellular region's variability is caused by different levels of glycosylation, and the splicing of the 4, 5, and 6 exons. The isoforms found in the mouse strains depend on the activation state, maturation stage and cell type, and are very important in B and T lymphocytes antigen receptor signal transduction.

RPA-T8, OKT8, and HIT8a antibodies do not compete with each other for binding to peripheral leukocytes, meaning that they do not recognize the same epitope or block each other by steric hindrance.

BG Violet 500 conjugate is an alternative to the Pacific Orange and BD Horizon V500 dyes. It is excited by the violet (405 nm) laser, with a peak emission of 500nm.

Preparation & Storage

The product should be stored undiluted at 4°C and should be protected from prolonged exposure to light. Do not freeze. The monoclonal antibody was purified utilizing affinity chromatography and unreacted dye was removed from the product.

Application Notes

The antibody has been analyzed for quality through the flow cytometric analysis of the relevant cell type. For flow cytometric staining, the suggested use of this reagent is ≤0.25 ug per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.

References

1. Coffman, R. L. (1983). Surface Antigen Expression and Immunoglobulin Gene Rearrangement During Mouse pre-B Cell Development. *Immunological reviews*,69(1), 5-23.
2. Allman, D. M., Ferguson, S. E., Cancro, M. P. (1992). Peripheral B cell maturation. I. Immature peripheral B cells in adults are heat-stable antigenhi and exhibit unique signaling characteristics.;*The Journal of Immunology*,149(8), 2533-2540.
3. Monteith, C. E., Chelack, B. J., Davis, W. C., Haines, D. M. (1996). Identification of monoclonal antibodies for immunohistochemical staining of feline B lymphocytes in frozen and formalin-fixed paraffin-embedded tissues.*Canadian journal of veterinary research*,;60(3), 193.