

Technical Data Sheet

Anti-Mouse/human CD45R/B220

Catalog Number: 200901, 200902

Size: 100 ug, 500 ug

Target Name: CD45R, B220

Regulatory Status: RUO

Product Details

Clone: RA3-6B2

Application: FC

Reactivity: Human, Mouse

Format: Purified

Isotype: Rat IgG2a

Antibody Type: Monoclonal

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide

Protein Concentration: 0.5 mg/mL

Storage and Handling: The antibody solution should be stored between 2°C and 8°C

Background Information

CD45R, also known as B220, is an isoform of CD45 (PTPRC), a member of the protein tyrosine phosphatase (PTP) family. With a molecular weight of approximately 180–240 kDa, CD45R is a transmembrane glycoprotein expressed on B cells at all developmental stages, as well as on activated B cells, subsets of T and NK cells, and certain abnormal T cell populations involved in systemic autoimmunity in MRL-Fas^{lpr} and MRL-Fas^{gld} mice. Structurally, CD45R consists of an extracellular domain, a single transmembrane region, and two tandem intracytoplasmic catalytic domains. Functionally, CD45R plays a critical role in T cell receptor (TCR) and B cell receptor (BCR) signaling by regulating Src-family kinases, which are essential for lymphocyte activation and development. The primary ligands for CD45 include galectin-1, CD2, CD3, and CD4. CD45R is widely used as a pan-B cell marker, though CD19 may provide greater specificity for B cells.