

## Technical Data Sheet

### iF488 Anti-Mouse/human CD45R/B220

**Catalog Number:** 200905, 200906

**Size:** 25 tests, 100 tests

**Target Name:** CD45R, B220

**Regulatory Status:** RUO

#### Product Details

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**Clone:** RA3-6B2

**Application:** FC

**Reactivity:** Human, Mouse

**Format:** iF488

**Isotype:** Rat IgG2a

**Antibody Type:** Monoclonal

**Formulation:** Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA

**Protein Concentration:** Supplied at a lot-specific concentration.

**Storage and Handling:** The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.

**Recommended Usage:** For flow cytometric staining, it is recommended to use 5 µL of this reagent per 0.5-1.0 million cells in a 100 µL volume. Optimal reagent performance should be determined by titration for each specific application.

**Excitation Laser:** Blue Laser (488 nm)

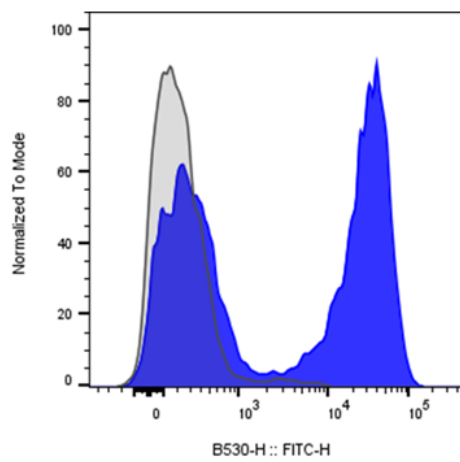
#### Background Information

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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<sup>lpr</sup> and MRL-Fas<sup>gld</sup> 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.

#### Product Data

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Mouse splenocytes stained with iF488 Anti-mouse/human CD45R\_B220 clone RA3-6B2 (blue histogram) or an isotype control (gray histogram).