

# CD45 / LCA Monoclonal Mouse Antibody (PTPRC/1460)

## Product Description

CD45R, also designated CD45 and PTPRC, has been identified as a transmembrane glycoprotein, broadly expressed among hematopoietic cells. Multiple isoforms of CD45R are distributed throughout the immune system according to cell type. These isoforms arise because of alternative splicing of exons 4, 5, and 6. The corresponding protein domains are characterized by the binding of monoclonal antibodies specific for CD45RA (exon 4), CD45RB (exon 5), CD45RC (exon 6) and CD45RO (exons 4 to 6 spliced out). The variation in these isoforms is localized to the extracellular domain of CD45R, while the intracellular domain is conserved. CD45R functions as a phosphor-tyrosine phosphatase. This MAb reacts with all isoforms of CD45R expressed by all hematopoietic cells, except erythrocytes, having a higher level of expression on lymphocytes than on granulocytes (Workshop IV). Antibody to CD45 is useful in differential diagnosis of lymphoid tumors from non-hematopoietic undifferentiated neoplasms. Primary antibodies are available purified, or with a selection of fluorescent CF® dyes and other labels. CF® dyes offer exceptional brightness and photostability. See the [CF® Dye Brochure](#) for more information. Note: Conjugates of blue fluorescent dyes like CF®405S and CF®405M are not recommended for detecting low abundance targets, because blue dyes have lower fluorescence and can give higher non-specific background than other dye colors. **Stock status:** Because Biotium offers a large number of antibody and conjugation options, primary antibody conjugates may be made to order. Typical lead times are up to one week for CF® dye and biotin conjugates, and up to 2-3 weeks for fluorescent protein and enzyme conjugates. Please email [order@biotium.com](mailto:order@biotium.com) to inquire about stock status and lead times before placing your order. **Catalog number key for antibody number 1460, Anti-CD45 (PTPRC/1460)**

## Product attributes

|                                       |  |
|---------------------------------------|--|
| Antibody number                       | #1460  |
| Antibody reactivity (target)          | CD45, LCA  |
| Antibody type                         | Primary  |
| Host species                          | Mouse  |
| Clonality                             | Monoclonal   |
| Clone                                 | PTPRC/1460   |
| Isotype                               | IgG1, kappa  |
| Molecular weight                      | 180-220 kDa  |
| Synonyms                              | B220, CD45R, GP180, Leukocyte common antigen (LCA), Loc, Ly-5, Lyt-4, Protein tyrosine phosphatase receptor type C (PTPRC), Receptor-type tyrosine-protein phosphatase C, T200 glycoprotein  |
| Human gene symbol                     | PTPRC  |
| Entrez gene ID                        | 5788   |
| SwissProt                             | P08575   |
| Unigene                               | 654514   |
| Immunogen                             | Human B-lymphocytes  |
| Antibody target cellular localization | Plasma membrane  |
| Verified antibody applications        | IHC (FFPE) (verified)  |
| Species reactivity                    | Human  |
| Antibody application notes            | Higher concentration may be required for direct detection using primary antibody conjugates than for indirect detection with secondary antibody. Immunofluorescence: 0.5-1 ug/mL, Immunohistology (formalin): 0.5-1 ug/mL, Staining of formalin-fixed tissues requires boiling tissue sections in 10 mM citrate buffer, pH 6.0, for 10-20 min followed by cooling at RT for 20 min, Flow Cytometry 0.5-1 ug/million cells/0.1 mL, Optimal dilution for a specific application should be determined by user |
| Positive control                      | Ramos, U-698, or GA-10 cells. Tonsil   |
| Shipping condition                    | Room temperature   |
| Storage Conditions                    | Store at 2 to 8 °C, Protect fluorescent conjugates from light, Note: store BSA-free antibodies at -10 to -35 °C  |
| Shelf life                            | Guaranteed for at least 24 months from date of receipt when stored as recommended  |
| Regulatory status                     | For research use only (RUO)  |
| Antibody/conjugate formulation        | Conjugates: 0.1 mg/mL in PBS/0.1% BSA/0.05% azide, HRP conjugates: 0.1 mg/mL in PBS/0.05% BSA, Purified: 0.2 mg/mL in PBS/0.05% BSA/0.05% azide, Purified, BSA-free: 1 mg/mL in PBS without azide  |
| Antibody research areas               | Immunology, Signal transduction  |
| Cell/tissue expression                | Hematopoietic cells  |
| Tumor expression                      | Leukemia/lymphoma  |

| Antibody # prefix | Conjugation        | Ex/Em (nm) | Laser line | Detection channel        | Dye Features                     |
|-------------------|--------------------|------------|------------|--------------------------|----------------------------------|
| BNC04             | CF®405S            | 404/431    | 405        | DAPI (microscopy), AF405 | <a href="#">CF®405S Features</a> |
| BNC88             | CF®488A            | 490/515    | 488        | GFP, FITC                | <a href="#">CF®488A Features</a> |
| BNC68             | CF®568             | 562/583    | 532, 561   | RFP, TRITC               | <a href="#">CF®568 Features</a>  |
| BNC94             | CF®594             | 593/614    | 561        | Texas Red®               | <a href="#">CF®594 Features</a>  |
| BNC40             | CF®640R            | 642/662    | 633-640    | Cy®5                     | <a href="#">CF®640R Features</a> |
| BNC47             | CF®647             | 650/665    | 633-640    | Cy®5                     | <a href="#">CF®647 Features</a>  |
| BNCB              | Biotin             | N/A        | N/A        | N/A                      |                                  |
| BNUB              | Purified           | N/A        | N/A        | N/A                      |                                  |
| BNUM              | Purified, BSA-free | N/A        | N/A        | N/A                      |                                  |

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