ALPHA DIAGNOSTIC INTERNATIONAL

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Product Data Sheet

# Human CD20 (MS4A1) Antibodies and Conjugates

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|---|---|---|
| **Cat#** CD20UL-100 | Mouse Anti-Human CD20 IgG, Unlabeled | **Size**: 100 ug |
| **Cat#** CD20F-100 | Mouse Anti-Human CD20 IgG-FITC Conjugate | **Size**: 100 tests |
| **Cat#** CD20P-100 | Mouse Anti-Human CD20 IgG-PE Conjugate | **Size**: 100 tests |
| **Cat#** CD20PC-100 | Mouse Anti-Human CD20 IgG-PE-Cy5 Conjugate | **Size**: 100 tests |

B-lymphocyte antigen CD20 or CD20 is an activated-glycosylated phosphoprotein expressed on the surface of all B-cells beginning at the pro-B phase (CD45R+, CD117+) and progressively increasing in concentration until maturity. In humans CD20 is encoded by the MS4A1 gene. This gene encodes a member of the membrane-spanning 4A gene family. Members of this nascent protein family are characterized by common structural features and similar intron/exon splice boundaries and display unique expression patterns among hematopoietic cells and nonlymphoid tissues. This gene encodes a B-lymphocyte surface molecule that plays a role in the development and differentiation of B-cells into plasma cells. This family member is localized to 11q12, among a cluster of family members. Alternative splicing of this gene results in two transcript variants that encode the same protein. The protein has no known natural ligand and its function is to enable optimal B-cell immune response, specifically against T-independent antigens.

CD20 is the target of the monoclonal antibodies (mAb) rituximab, Ibritumomab tiuxetan, Ofatumumab, and tositumomab, which are all active agents in the treatment of all B cell lymphomas and leukemias. Additional anti-CD20 antibody therapeutics under development include AME-133v, Ocrelizumab for multiple sclerosis, TRU-015 (by Trubion), and IMMU-106 (veltuzumab).

CD20 is a 33-37 kDa unglycosylated phosphoprotein. Monoclonal anti-human CD20 antibody is produced in mouse (**IgG1**), purified, and coupled to FITC, PE, Cy5 etc).

**Matching isotype (IgG1) Controls**

| Catalog# | ProdDescription |
|---|---|
| 20102-101 | Mouse IgG1 isotype control, purified |
| 20102-101-APC | Mouse IgG1-APC conjugate (isotype control) |
| 20102-101-B | Mouse IgG1-Biotin conjugate (isotype control) |
| 20102-101-F | Mouse IgG1-FITC conjugate (isotype control) |
| 20102-101-FP | Mouse IgG1-FITC-PE conjugate control) |
| 20102-101-HP | Mouse IgG1-HRP conjugate (isotype control) |
| 20102-101-PC5 | Mouse IgG1-PE-Cy5 conjugate control) |
| 20102-101-PE | Mouse IgG1-PE conjugate (isotype control) |

## Cat# CD20UL-100, unlabeled

The antibody is supplied in PBS, pH 7.4, and 0.05% azide in either **lyophilized** (100 ug/100 tests) or **liquid** form (see lot specific volume indicated on the vial). Reconstitute powder in PBS. Store at -2-4oC. Stability is ~6-12 months. Do not freeze and thaw.

## Cat# CD20F-100, FITC-conjugate

Purified antibody (IgG1) was coupled to FITC at F/P ratio ~5. The antibody is supplied in PBS, pH 7.4, 1% BSA (see lot sp concn on the vial) or in powder form. **Reconstitute** powder in PBS**.** Store at -20oC in suitable aliquots. Stability is ~6-12 months. Do not freeze/thaw.
Suggested conjugate dilutions are 1:20-1:500 for immunofluorescence. Or 1 test equivalent of antibody per million cells.
**Absorption** @495 nm **Emission** @528 nm

## Cat# CD20P-100, PE-conjugate

The purified antibody was coupled to R-Phycoerythrin (R-PE) (Molecular Weight 240,000 daltons) from seaweed using proprietary methods (A565nm/A280nm ~3-4).

**Absorption** @490 nm, 545 nm and 565 nm
**Emission** Wavelength: 580 nm

The conjugate is provided in PBS, pH 7.5, containing 0.1% bovine serum albumin, (BSA) 0.05% sodium azide and stabilizing agent). DO NOT FREEZE. The product should be stored at 4oC and is stable for a minimum of 1 year. Do not store diluted solutions.

Recommended usage 1 test equivalent of antibody per million cells for Flow cytometry or FACS. Due to many experimental variations, optimum concn must be determined for a given applications

## Cat# CD20PC-100, PE-Cy5-conjugate

Purified antibody was coupled to PE-Cy5.5 (Cyanine 5.29-OSu) (Molecular Weight 975 daltons) at F/P ratio ~6:1. The antibody is supplied in PBS, pH 7.4, 0.5% BSA, IgG, and 0.05% azide in either **lyophilized** or **liquid** form (see lot specific conc on the vial). Reconstitute powder in PBS. Store at -20oC in suitable aliquots. Stability is ~6-12 months. Do not freeze and thaw.

**Suggested applications**: Suitable for immunomicroscopy and flow cytometry or FACS analysis as well as other antibody based fluorescent assays

**Suggested conjugate dilutions** are 1:100-1:500 for immunofluorescence. Users must optimize the dilutions for a given technique. Or 1 test equivalent of antibody per million cells.
**Absorption** Wavelength: 650 nm
**Emission** Wavelength: 667 nm

**Recommended Working Dilution for ELISA**
Working dilution for the specific application should be determined by the investigator to obtain the best conditions and prepared immediately before use. Diluted solution should be discarded. This product can be used in immunodiffusion, ELISA, flow cytometry, immunofluorescence or immunolocalization.
For In vitro research use only.

Refs: Tedder TF (1988) PNAS 85, 208; Cragg MS (2005) Current Directions in Autoimmunity 8: 140;



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