

## Technical Data Sheet

### APC Conjugated Human CD20 Protein (TrxA tag)

**Catalog Number:** 801203, 801204  
**Size:** 25 ug, 100 ug  
**Target Name:** CD20, B1, Bp35, MS4A1  
**Regulatory Status:** RUO

#### Product Details

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**Application:** FC  
**Format:** Liquid, APC  
**Expression Host:** E.coli  
**Species:** Human  
**Sources:** Recombinant Human CD20 protein with C-terminusTrxA tag is expressed in E.coli and conjugated to APC.  
**Accession Number:** P11836  
**Molecular Weight:** The protein has a predicted molecular weight of 54kDa. Under DTT-reducing conditions, it migrates at approximately 70 kDa on SDS-PAGE prior to conjugation.  
**Affinity Tag:** C-TrxA  
**Formulation:** 1xPBS buffer, pH7.4, 0.09% NaN3 with a carrier protein  
**Endotoxin level:** Not tested  
**Protein Concentration:** 25µg size is bottled at 0.1mg/mL concentration. 100 µg size is bottled at lot specific concentration.  
**Storage and Handling:** Briefly centrifuge the vial upon receipt. An unopened vial may be stored at 2–8°C for up to six months.

#### Background Information

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CD20, also known as MS4A1, B1, Bp35, and Leu-16, is a 33–37 kDa glycosylated phosphoprotein with four transmembrane domains, primarily expressed on B cells from the late pro-B stage to memory B cells, but absent on early pro-B cells, plasmablasts, and plasma cells. It is also weakly expressed on some T cells and follicular dendritic cells. CD20 plays a key role in B-cell activation and proliferation, possibly acting as a calcium channel through homo-oligomeric complexes. It interacts with Src family kinases (Lyn, Lck, Fyn) and forms complexes with MHC class I/II, CD53, CD81, and CD82. Although it lacks a known natural ligand, CD20 is essential for T-independent B-cell immune responses. It is highly expressed in B-cell malignancies such as lymphomas, CLL, and hairy cell leukemia, and is the target of therapeutic antibodies including rituximab, ibritumomab tiuxetan, and tositumomab. Mutations in CD20/MS4A1 can lead to common variable immunodeficiency type 5 (CVID5), characterized by antibody deficiency, hypogammaglobulinemia, and recurrent infections.