

## PE Human CD20 Protein (TrxA tag)

<b>Catalog Number:</b>	801201, 801202
<b>Size:</b>	25 ug, 100 ug
<b>Target Name:</b>	CD20, B1, Bp35, MS4A1
<b>Regulatory Status:</b>	RUO

### PRODUCT DETAILS

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<b>Application:</b>	Flow Cytometry
<b>Format:</b>	Liquid, PE
<b>Expression Host:</b>	E.coli
<b>Species:</b>	Human
<b>Sources:</b>	Recombinant Human CD20 protein with C-terminusTrxA tag is expressed in E.coli and conjugated to PE.
<b>Accession Number:</b>	P11836
<b>Molecular Weight:</b>	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.
<b>Affinity Tag:</b>	C-TrxA
<b>Formulation:</b>	1xPBS buffer, pH7.4, 0.09% NaN3 with a carrier protein
<b>Endotoxin level:</b>	Not tested
<b>Protein Concentration:</b>	25µg size is bottled at 0.1mg/mL concentration. 100 µg size is bottled at lot specific concentration.
<b>Storage and Handling:</b>	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.