

Technical Data Sheet

PE Conjugated Human CD20 Protein (TrxA tag)

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

Product Details

Application: FC

Format: Liquid, PE

Expression Host: E.coli

Species: Human

Sources: Recombinant Human CD20 protein with C-terminus TrxA tag is expressed in E.coli and conjugated to PE.

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

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.