

**Synonym**

CD19, B4, CVID3, MGC12802

Source

FITC-Labeled Human CD19 (20-291), His Tag (Cat. No. CD9-HF2H2) is expressed from human HEK293 cells. It contains AA Pro 20 - Lys 291 (Accession # [P15391-1](#)). It is the FITC labeled form of Human CD19, His Tag (Cat. No. CD9-H52H2).

Predicted N-terminus: Pro 20

Molecular Characterization

CD19(Pro 20 - Lys 291)
P15391-1

Poly-his

[Other Tags and Version](#) [Biotin & Other Labeled Version](#)

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 32.0 kDa. The protein migrates as 47-58 kDa when calibrated against [Star Ribbon Pre-stained Protein Marker](#) under reducing (R) condition (SDS-PAGE) due to glycosylation.

Conjugate

FITC

Excitation source: 488 nm spectral line, argon-ion laser

Excitation Wavelength: 488 nm

Emission Wavelength: 535 nm

Labeling

The primary amines in the side chains of lysine residues and the N-terminus of the protein are conjugated with FITC using standard chemical labeling method. The residual FITC is removed by molecular sieve treatment during purification process.

Protein Ratio

The FITC to protein molar ratio is **2-4**.

Purity

>90% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please protect from light and avoid repeated freeze-thaw cycles.

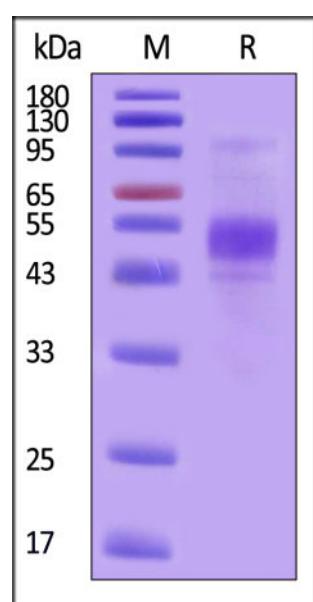
This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

ACRO Quality Management System

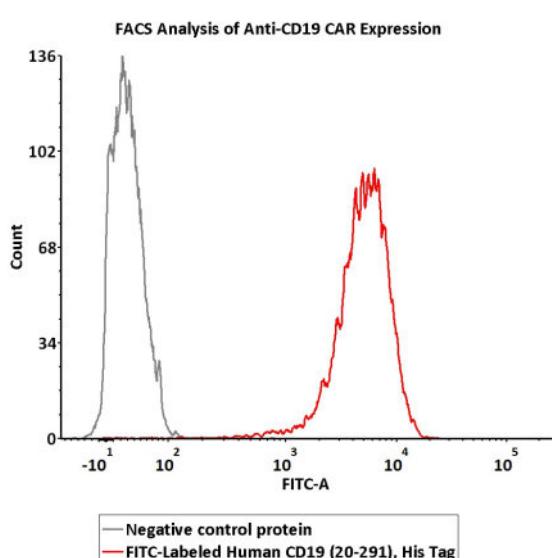
- [QMS\(ISO, GMP\)](#)
- [Quality Advantages](#)
- [Quality Control Process](#)

SDS-PAGE



FITC-Labeled Human CD19 (20-291), His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With [Star Ribbon Pre-stained Protein Marker](#)).

Bioactivity-FACS



2e5 of anti-CD19 CAR-293 cells were stained with 100 μ L of 10 μ g/mL of FITC-Labeled Human CD19 (20-291), His Tag (Cat. No. CD9-HF2H2) and negative control protein respectively. FITC signal was used to evaluate the binding activity (QC tested).

Background

B-lymphocyte antigen CD19 is also known as CD19 (Cluster of Differentiation 19), is a single-pass type I membrane protein which contains two Ig-like C2-type (immunoglobulin-like) domains. CD19 is expressed on follicular dendritic cells and B cells. In fact, it is present on B cells from earliest recognizable B-lineage cells during development to B-cell blasts but is lost on maturation to plasma cells. It primarily acts as a B cell co-receptor in conjunction with CD21 and CD81. Upon activation, the cytoplasmic tail of CD19 becomes phosphorylated, which leads to binding by Src-family kinases and recruitment of PI-3 kinase. As on T cells, several surface molecules form the antigen receptor and form a complex on B lymphocytes. The (almost) B cell-specific CD19 phosphoglycoprotein is one of these molecules. The others are CD21 and CD81. These surface immunoglobulin (sIg)-associated molecules facilitate signal transduction. On living B cells, anti-immunoglobulin antibody mimicking exogenous antigen causes CD19 to bind to sIg and internalize with it. The reverse process has not been demonstrated, suggesting that formation of this receptor complex is antigen-induced. This molecular association has been confirmed by chemical studies. Mutations in CD19 are associated with severe immunodeficiency syndromes characterized by diminished antibody production. CD19 has been shown to interact with: CD81, CD82, Complement receptor 2, and VAV2.

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