



## Synonym

CD19,B4,CVID3,MGC12802

## Source

PE-Labeled Human CD19 (20-291), His Tag (CD9-HP2H3) is produced via site-specific conjugation of PE to Human CD19 (20-291), His Tag under optimal conditions with a proprietary technology. Human CD19 (20-291), His Tag is expressed from human 293 cells (HEK293). It contains AA Pro 20 - Lys 291 (Accession # [P15391-1](#)).

Predicted N-terminus: Pro 20

## Molecular Characterization

CD19(Pro 20 - Lys 291)  
P15391-1 Poly-his

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

The protein has a calculated MW of 33.7 kDa.

## Conjugate

PE

Excitation Wavelength: 488 nm / 561 nm

Emission Wavelength: 575 nm

## Application

Evaluation of anti-CD19 CAR expression by flow cytometry. Please note that this product is NOT compatible to streptavidin detection system.

## Formulation

Lyophilized from 0.22  $\mu$ m filtered solution in PBS, 0.5% BSA, 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

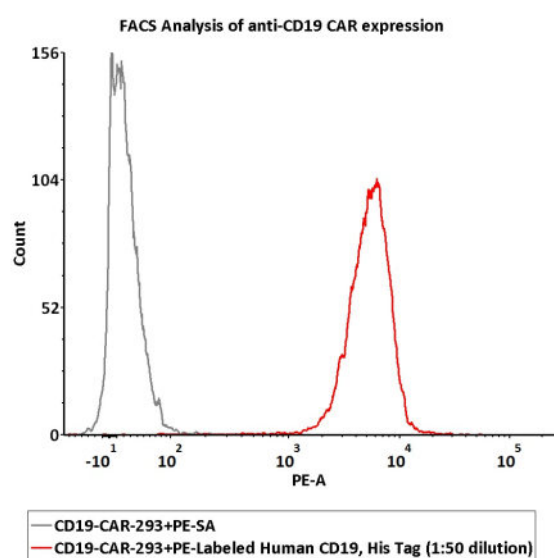
For long term storage, the product should be stored at lyophilized state at  $-20^{\circ}\text{C}$  or lower.

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

This product is stable after storage at:

- $-20^{\circ}\text{C}$  to  $-70^{\circ}\text{C}$  for 12 months in lyophilized state;
- $-70^{\circ}\text{C}$  for 3 months under sterile conditions after reconstitution.

## Bioactivity-FACS



$1 \times 10^6$  of the anti-CD19 CAR-293 cells were stained with 100  $\mu$ L of 1:50 dilution (2  $\mu$ L stock solution in 100  $\mu$ L FACS buffer) of PE-Labeled Human CD19 (20-291), His Tag (Cat. No. CD9-HP2H3) (QC tested).

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## 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.

## Clinical and Translational Updates

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.

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