SUITE 203, 17 Ramsey Road, Shirley, NY 11967, USA
Tel: 1-631-416-1478 Fax: 1-631-207-8356
Email: info@creative-biolabs.com
www.creative-biolabs.com

Product Information

MemDX™ Recombinant Human CD19 Membrane Protein in Virus-Like Particles (MP-VLPs)

Cat. No.: **MPVLP-030**
This product is for research use only and is not intended for diagnostic use.

This product is recombinant Human CD19 in VLPs form. This product is produced from mammalian cells by co-expressing the retroviral structural core polyprotein (gag) and the target membrane protein. MP-VLPs display highly-expressed copies of membrane proteins in their native conformation, providing an alternative to membrane protein stable cell lines, membrane preparations, detergent-solubilized proteins and other membrane protein preparation strategies. MP-VLPs can be used for a wide range of applications in antibody production, antibody discovery, antibody characterization, binding assays and functional assays.

Product Specifications

Host Species
Human

Target Protein
CD19

Protein Length
Full length

Protein Class
Immunity; CAR Target

TMD
1

Product Description

Application
ELISA; Antibody Production; Antibody Discovery; Antibody Characterization; Binding Assays; Functional Assays

Expression Systems
HEK293 expression system

Protein Format
Membrane Protein-Virus Like Particles (MP-VLPs)

Form
Liquid

Storage
The product should be stored at -20°C or lower. Avoid freeze-thaw cycles.

Target

Target Protein

CD19

Full Name

CD19 molecule

Introduction

This gene encodes a member of the immunoglobulin gene superfamily. Expression of this cell surface protein is restricted to B cell lymphocytes. This protein is a reliable marker for pre-B cells but its expression diminishes during terminal B cell differentiation in antibody secreting plasma cells. The protein has two N-terminal extracellular Ig-like domains separated by a non-Ig-like domain, a hydrophobic transmembrane domain, and a large C-terminal cytoplasmic domain. This protein forms a complex with several membrane proteins including complement receptor type 2 (CD21) and tetraspanin (CD81) and this complex reduces the threshold for antigen-initiated B cell activation. Activation of this B-cell antigen receptor complex activates the phosphatidylinositol 3-kinase signalling pathway and the subsequent release of intracellular stores of calcium ions. This protein is a target of chimeric antigen receptor (CAR) T-cells used in the treatment of lymphoblastic leukemia. Mutations in this gene are associated with the disease common variable immunodeficiency 3 (CVID3) which results in a failure of B-cell differentiation and impaired secretion of immunoglobulins. CVID3 is characterized by hypogammaglobulinemia, an inability to mount an antibody response to antigen, and recurrent bacterial infections. Alternative splicing results in multiple transcript variants encoding distinct isoforms.

Alternative Names

B4; CVID3; B-lymphocyte antigen CD19; B-lymphocyte surface antigen B4; T-cell surface antigen Leu-12; differentiation antigen CD19

Gene ID

930

UniProt ID

P15391

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