

Product Information

MemDX™ Human CD19 MC-38 Cell Line

Cat. No.: **S01YF-0123-KX177**

This product is for research use only and is not intended for diagnostic use.

Product Information

Target Protein

CD19

Target Protein Species

Human

Accession Number

NM_001178098.1

Protein Tag

Tag-free

Host Cell Type

MC-38

Target Classification

CD

Target Family

CD

Target Research Area

Autoimmune Research; Immunology Research

Related Diseases

Immunodeficiency

Product Properties

Morphology

Fibroblastoid cells growing as a monolayer

Assay Types

Drug screening and biological assays

Resistance

Puromycin

Mycoplasma Testing

Negative

Sterility Testing

10 passages

Biosafety Level

Level 1

Activity

Yes

Quantity

5x10⁶ cells

Form

Frozen cells

Freeze Medium

70% RPMI 1640 + 20% FBS + 10% DMSO

Culture Medium

RPMI 1640 + 10% FBS + 5µg/mL Puromycin

Selective Antibiotic(s)

Regular antibiotics active against mycoplasmas, bacteria and fungi.

Handling Notes

Frozen cells should be thawed immediately upon receipt and grown according to handling procedure to ensure cell viability and proper assay performance.

Note: Do not freeze the cells upon receipt as it may result in irreversible damage to the cell line.

Disclaimer: We cannot guarantee cell viability if the cells are not thawed immediately upon receipt and grown according to handling procedure.

Incubation

37°C with 5% CO₂

Applications

Drug screening and biological assays

Application Notes

Cells were plated in a 384-well plate and incubated overnight at 37°C and 5% CO₂ to allow the cells to attach and grow. Cells were then stimulated with a control for high-throughput drugs screening and functional assays.

Use Restrictions

These cells are distributed for research use only.

Shipping

Dry ice

Storage

Liquid nitrogen

Target

Full Name

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

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

Gene ID

[930](#)

UniProt ID

[P15391](#)