



## Rabbit Anti-CD19 antibody

SLM-60605R

**Product Name** CD19

**Chinese Name** CD19Recombinant rabbit monoclonal anti

**Alias** Antibody deficiency due to defect in CD19, included; AW495831; B lymphocyte antigen CD19; surface antigen B4; B4; CD 19; CD19 antigen; CD19 molecule; Cd19 protein; Differentiation A Leu 12; Leu12; Lymphocyte Surface Antigen; MGC109570; MGC12802; T-cell surface antigen CD19\_HUMAN.

**Research Area** Cardiovascular immunology Stem cells

**Immunogen Species** Rabbit

**Clonality** Monoclonal

**React Species** Human

**Applications** WB=1:500-2000,IHC-P=1:200-1000,IHC-F=1:200-1000,ICC/IF=1:50-200,IF=1:200-1000,Flow (Paraffin sections need antigen repair)  
not yet tested in other applications.  
optimal dilutions/concentrations should be determined by the end user.

**Theoretical molecular weight** 59kDa

**Detection molecular weight** 95 kDa

**Cellular localization** The cell membrane

**Form** Liquid

**Concentration** 1mg/ml

**immunogen** KLH conjugated synthetic peptide derived from human CD19

**Lsotype** IgG

**Purification** affinity purified by Protein A

**Buffer Solution** 1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.

**Storage** Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.

**Attention**

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

**PubMed**

[PubMed](#)

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 is down-regulated 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 stored calcium ions. This protein is a target of chimeric antigen receptor (CAR) T-cells used in the treatment of acute leukemia. Mutations in this gene are associated with the disease common variable immunodeficiency type 3 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, recurrent bacterial infections. Alternative splicing results in multiple transcript variants encoding distinct isoforms. [provided by RefSeq, Jul 2020]

**Function:**

Assembles with the antigen receptor of B-lymphocytes in order to decrease the threshold for antigen receptor-dependent stimulation.

**Product Detail**

**Subunit:**

Forms a complex with CD21, CD81 and CD225 in the membrane of mature B-cells. Interacts with CD21, CD81, CD225, CD226, CD227, CD228, CD229, CD230, CD231, CD232, CD233, CD234, CD235, CD236, CD237, CD238, CD239, CD240, CD241, CD242, CD243, CD244, CD245, CD246, CD247, CD248, CD249, CD250, CD251, CD252, CD253, CD254, CD255, CD256, CD257, CD258, CD259, CD260, CD261, CD262, CD263, CD264, CD265, CD266, CD267, CD268, CD269, CD270, CD271, CD272, CD273, CD274, CD275, CD276, CD277, CD278, CD279, CD280, CD281, CD282, CD283, CD284, CD285, CD286, CD287, CD288, CD289, CD290, CD291, CD292, CD293, CD294, CD295, CD296, CD297, CD298, CD299, CD300, CD301, CD302, CD303, CD304, CD305, CD306, CD307, CD308, CD309, CD310, CD311, CD312, CD313, CD314, CD315, CD316, CD317, CD318, CD319, CD320, CD321, CD322, CD323, CD324, CD325, CD326, CD327, CD328, CD329, CD330, CD331, CD332, CD333, CD334, CD335, CD336, CD337, CD338, CD339, CD340, CD341, CD342, CD343, CD344, CD345, CD346, CD347, CD348, CD349, CD350, CD351, CD352, CD353, CD354, CD355, CD356, CD357, CD358, CD359, CD360, CD361, CD362, CD363, 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**Subcellular Location:**

Membrane; Single-pass type I membrane protein.

**Post-translational modifications:**

Phosphorylated on serine and threonine upon DNA damage, probably by ATM or ATR. Phosphorylated on tyrosine following B-cell activation. Phosphorylated on tyrosine residues by LYN.

**DISEASE:**

Defects in CD19 are the cause of immunodeficiency common variable type 3 (CVID3) [MIM:610520] called antibody deficiency due to CD19 defect. CVID3 is a primary immunodeficiency characterized by antibody deficiency, hypogammaglobulinemia, recurrent bacterial infections and an inability to mount an antibody response to antigen. The defect results from a failure of B-cell differentiation and impaired secretion of immunoglobulins; the numbers of circulating B-cells is usually in the normal range, but can be low.

**Similarity:**

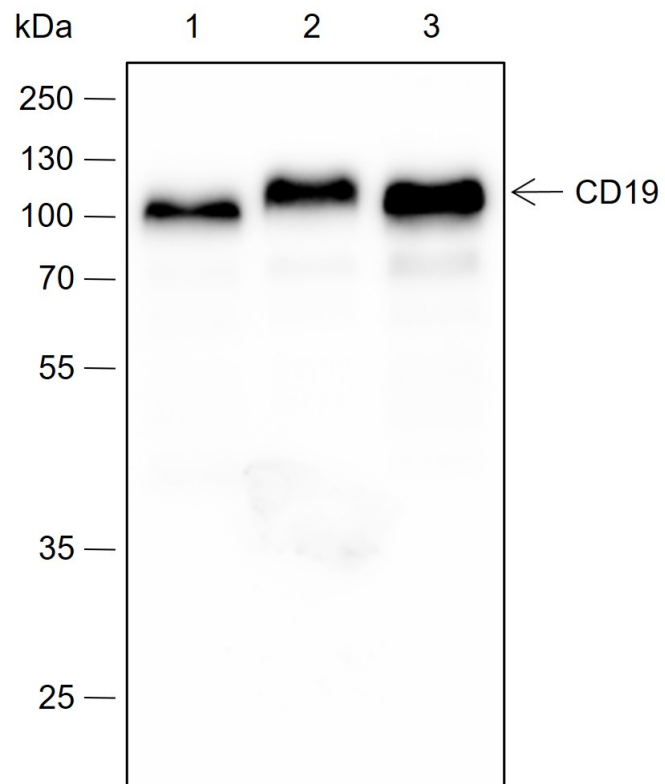
Belongs to the selectin/LECAM family.

Contains 2 Ig-like C2-type (immunoglobulin-like) domains.

**SWISS:**  
P15391

**Gene ID:**  
930

**Product  
Picture**



Blocking buffer: 5% NFDN/TBST

Primary ab dilution: 1:2000

Primary ab incubation condition: 2 hours at room temperature

Secondary ab: Goat Anti-Rabbit IgG H&L (HRP)

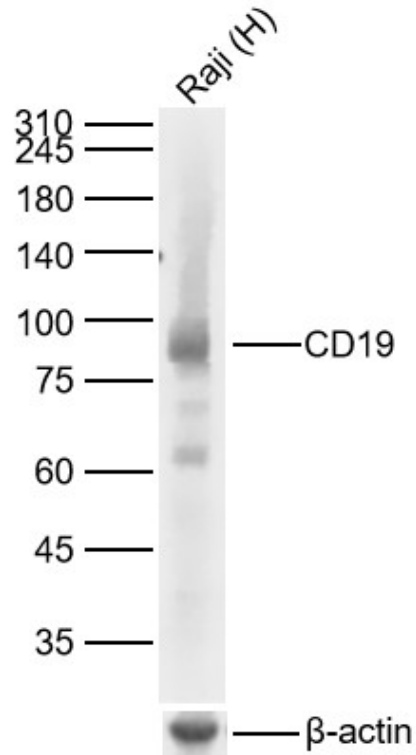
Lysate: 1: Ramos, 2: Daudi, 3: Raji

Protein loading quantity: 20  $\mu$ g

Exposure time: 30 s

Predicted MW: 61 kDa

Observed MW: 95 kDa



Sample:

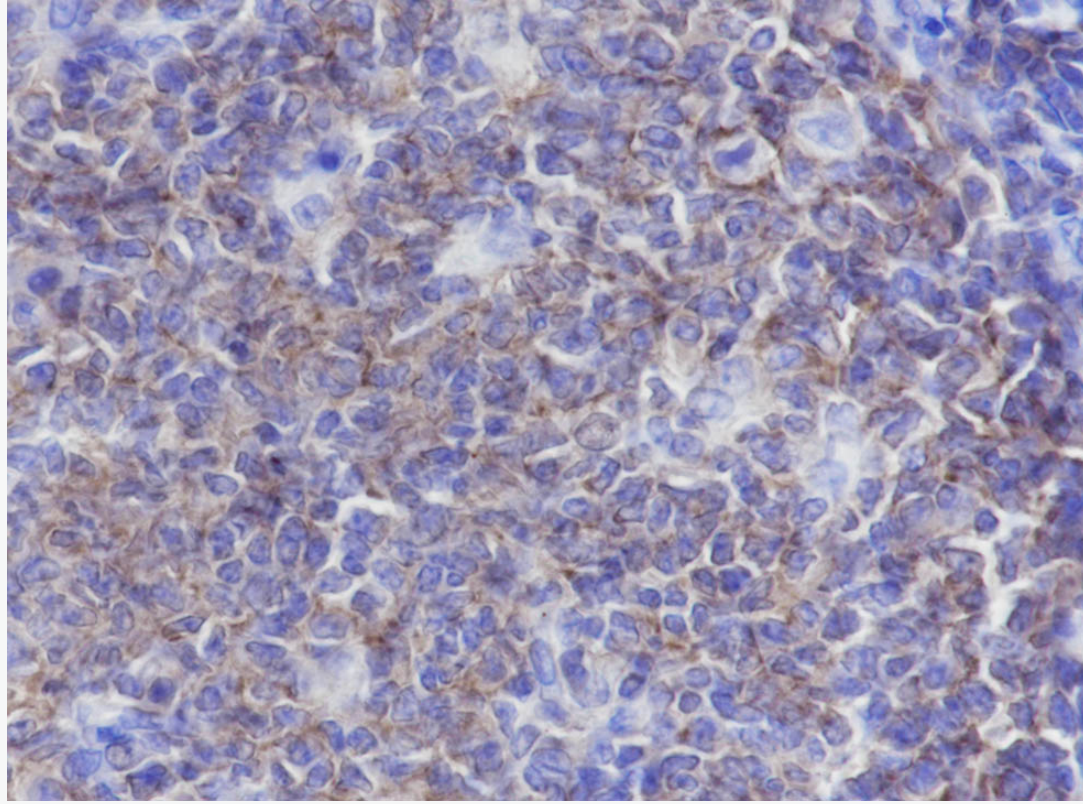
Lane 1: Human Raji cell Lysates

Primary: Anti-CD19 (SLM-60605R) at 1/1000 dilution

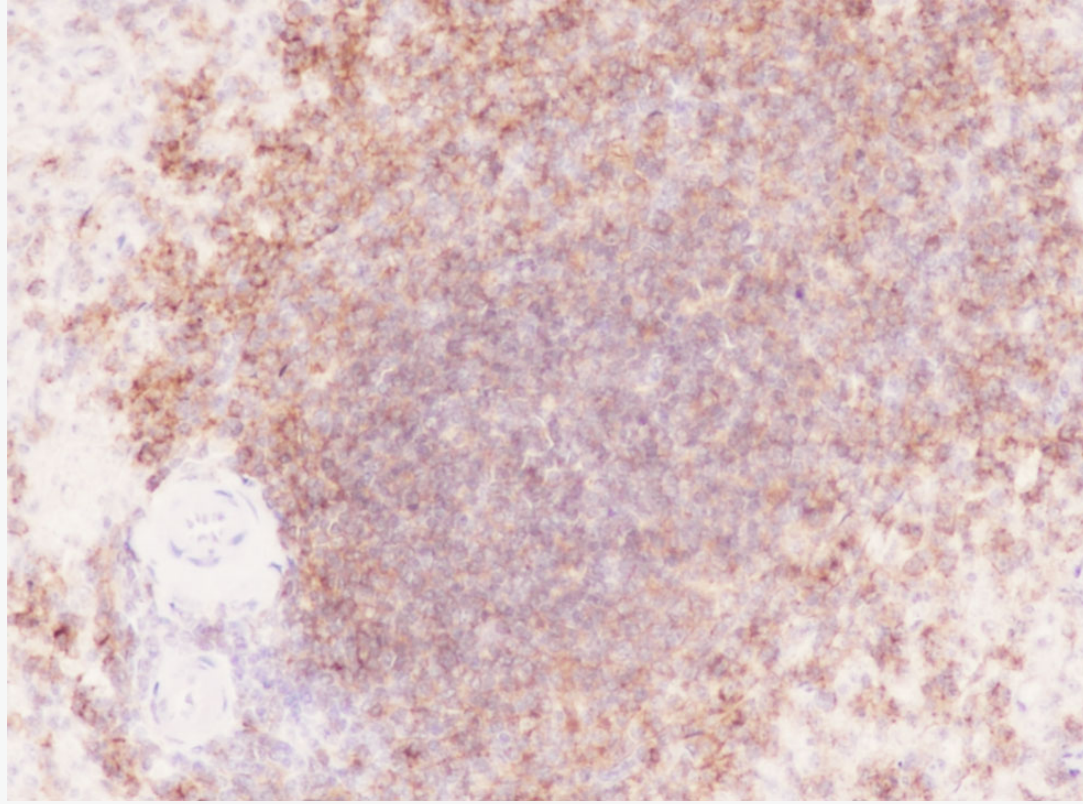
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 59kDa

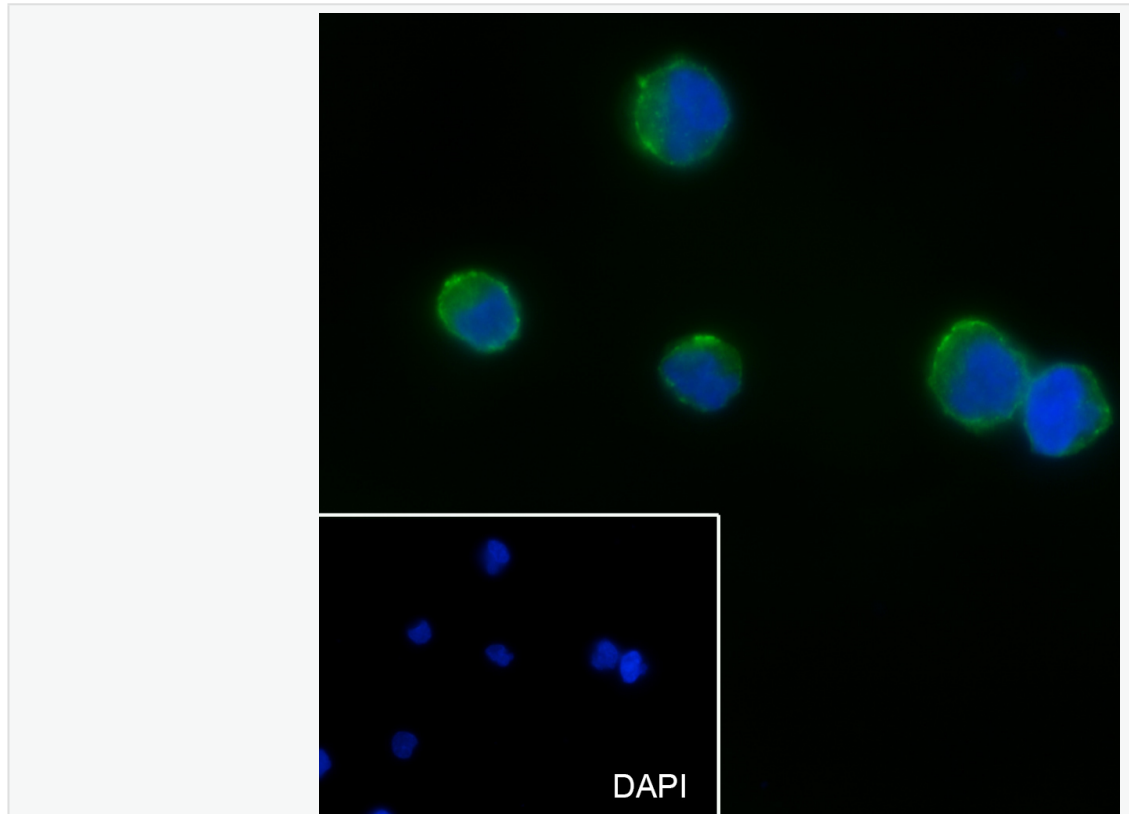
Observed band size: 90kDa



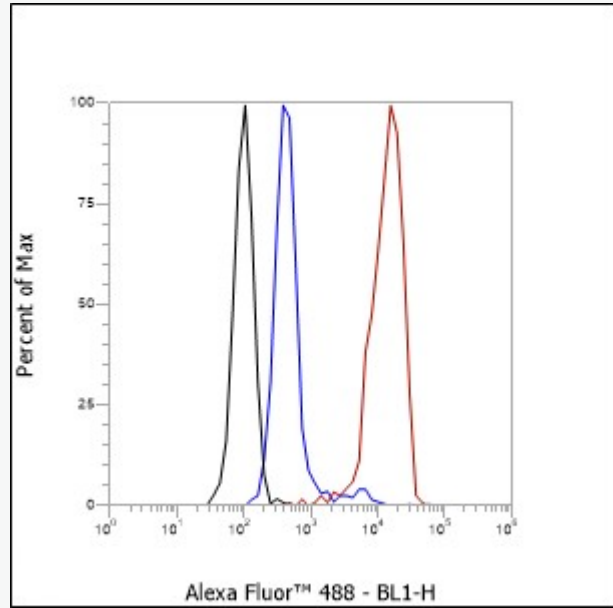
Tissue: Human tonsil Section type: Formalin fixed & Paraffin -embedded section Retrieval method: microwave temperature and high pressure Retrieval buffer: Tris/EDTA buffer, pH 9.0 Primary ab dilution: 1:1000  
Primary ab incubation condition: 1 hour at room temperature Secondary ab: SP Kit(Rabbit)(species) Counter stain: Hematoxylin (Blue) Comment: Color brown is the positive signal for SLM-606



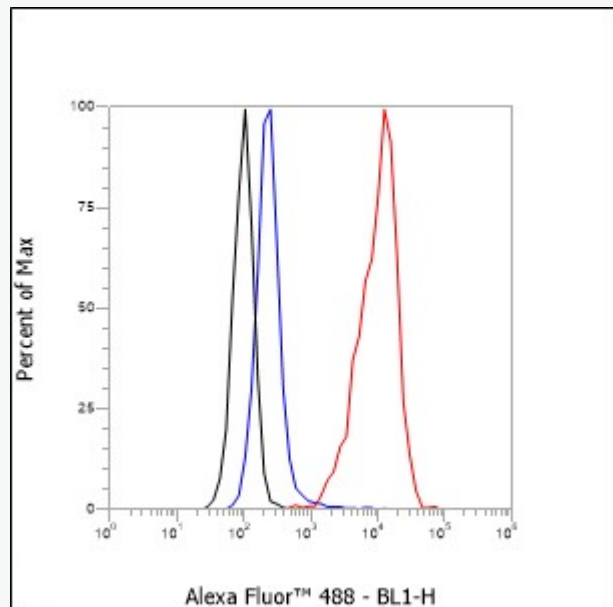
Tissue: Human spleen Section type: Formalin fixed & Paraffin -embedded section Retrieval method: microwave temperature and high pressure Retrieval buffer: Tris/EDTA buffer, pH 9.0 Primary ab dilution: 1:1000  
Primary ab incubation condition: 1 hour at room temperature Secondary ab: SP Kit(Rabbit) Counterstain: Hematoxylin (Blue) Comment: Color brown is the positive signal for SLM-60605R



Cell line: Raji Fixative: 4% Paraformaldehyde Permeabilization: 0.1% TritonX-100 Primary a  
1:50 Primary incubation condition: 4°C overnight Secondary ab: Goat Anti-Rabbit IgG Nucle  
stain: DAPI (Blue) Comment: Color green is the positive signal for SLM-60605R



Cell line: Raji Fixative: 4% Paraformaldehyde Permeabilization: 90% Methanol Primary ab d  
 Secondary ab: Goat anti Rabbit IgG Unlabelled control: The cell without incubation with prim  
 and secondary antibody (Black line). Isotype control: Rabbit monoclonal IgG (Blue line). Com  
 red is the positive signal for SLM-60605R





SunLong Biotech Co.,LTD

Tel: 0086-571-56623320 Fax:0086-571-56623318

E-mail:sales@sunlongbiotech.com

www.sunlongbiotech.com

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Cell line: Ramos Fixative: 4% Paraformaldehyde Permeabilization: 90% Methanol Primary ab: 1:100 Secondary ab: Goat anti Rabbit IgG Unlabelled control: The cell without incubation with antibody and secondary antibody (Black line). Isotype control: Rabbit monoclonal IgG (Blue line)  
Comment: Line red is the positive signal for SLM-60605R