

Datasheet for ABIN94027

## anti-CD20 antibody



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### Overview

Quantity:	0.1 mg
Target:	CD20 (MS4A1)
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This CD20 antibody is un-conjugated
Application:	Flow Cytometry (FACS)

### Product Details

Immunogen:	Normal human lymphocytes from lymph node.
Clone:	LT20
Isotype:	IgG2a
Specificity:	The antibody LT20 reacts with an extracellular epitope of CD20 (Bp35), a 33-37 kDa non-glycosylated membrane receptor with four transmembrane domains, expressed on B lymphocytes (it is lost on plasma cells), follicular dendritic cells, and at low levels on peripheral blood T lymphocytes.
Cross-Reactivity (Details):	Human
Purification:	Purified by protein-A affinity chromatography.
Purity:	> 95 % (by SDS-PAGE)

## Target Details

Target:	CD20 (MS4A1)
Alternative Name:	CD20 ( <a href="#">MS4A1 Products</a> )
Background:	<p>MS4A1,CD20 is a cell surface 33-37 (depending on the degree of phosphorylation) kDa non-glycosylated surface phosphoprotein expressed on mature and most malignant B cells, but not stem cells or plasma cells (low number of the CD20 has been also detected on a subpopulation of T lymphocytes and it can be expressed on follicular dendritic cells). Its expression on B cells is synchronous with the expression of surface IgM. CD20 regulates transmembrane calcium conductance (probably functioning as a component of store-operated calcium channel), cell cycle progression and B-cell proliferation. It is associated with lipid rafts, but the intensity of this association depends on extracellular triggering, employing CD20 conformational change and/or BCR (B cell antigen receptor) aggregation. After the receptor ligation, BCR and CD20 colocalize and then rapidly dissociate before BCR endocytosis, whereas CD20 remains at the cell surface. CD20 serves as a useful target for antibody-mediated therapeutic depletion of B cells, as it is expressed at high levels on most B-cell malignancies, but does not become internalized or shed from the plasma membrane following mAb treatment.,B1, S7, MS4A, Bp35, CVID5, LEU-16</p>
Gene ID:	931
UniProt:	<a href="#">P11836</a>

## Application Details

Application Notes:	Flow cytometry: Recommended dilution: 3 µg/mL.
Restrictions:	For Research Use only

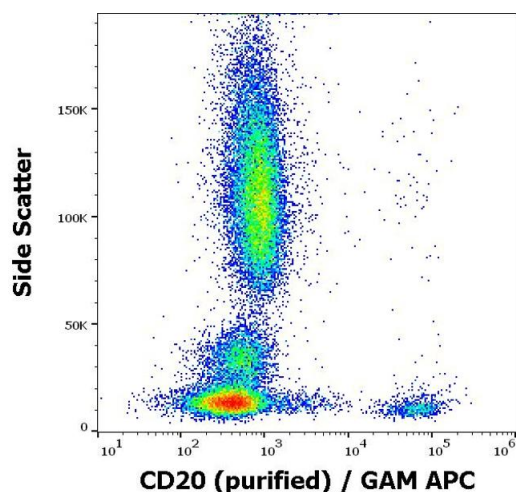
## Handling

Concentration:	1 mg/mL
Buffer:	Phosphate buffered saline (PBS), pH 7.4, 15 mM sodium azide
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Handling Advice:	<b>Do not freeze.</b>
Storage:	4 °C
Storage Comment:	Store at 2-8°C. Do not freeze.

## Publications

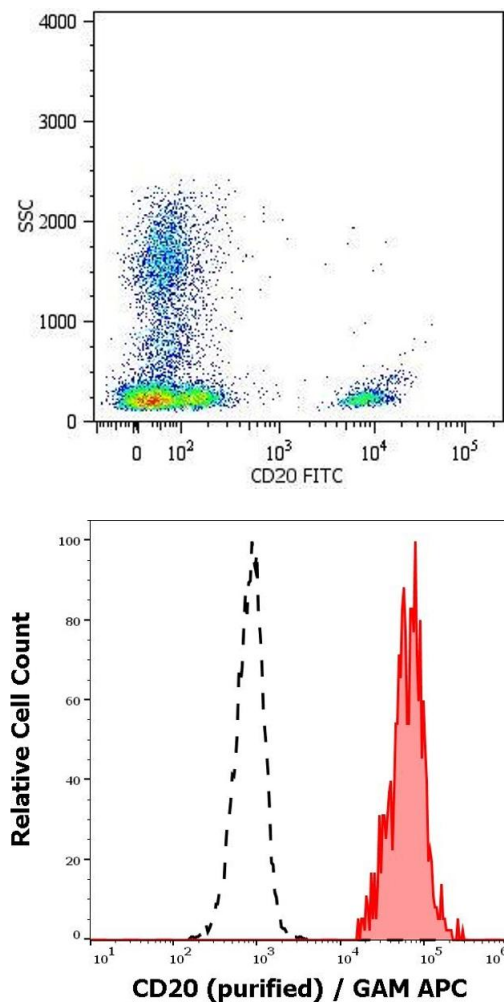
- Product cited in: Všianská, Říhová, Varmužová, Suská, Kryukov, Mikulášová, Kupská, Penka, Pour, Adam, Hájek: "Analysis of B-cell subpopulations in monoclonal gammopathies." in: **Clinical lymphoma, myeloma & leukemia**, Vol. 15, Issue 4, pp. e61-71, (2015) ([PubMed](#)).
- Filatov, Krotov, Zgoda, Volkov: "Fluorescent immunoprecipitation analysis of cell surface proteins: a methodology compatible with mass-spectrometry." in: **Journal of immunological methods**, Vol. 319, Issue 1-2, pp. 21-33, (2007) ([PubMed](#)).
- Teeling, Mackus, Wiegman, van den Brakel, Beers, French, van Meerten, Ebeling, Vink, Slootstra, Parren, Glennie, van de Winkel: "The biological activity of human CD20 monoclonal antibodies is linked to unique epitopes on CD20." in: **Journal of immunology (Baltimore, Md. : 1950)**, Vol. 177, Issue 1, pp. 362-71, (2006) ([PubMed](#)).
- Chan, Hughes, French, Tutt, Walshe, Teeling, Glennie, Cragg: "CD20-induced lymphoma cell death is independent of both caspases and its redistribution into triton X-100 insoluble membrane rafts." in: **Cancer research**, Vol. 63, Issue 17, pp. 5480-9, (2003) ([PubMed](#)).

## Images



### Flow Cytometry

**Image 1.** Flow cytometry surface staining pattern of human peripheral blood stained using anti-human CD20 (LT20) purified antibody (concentration in sample 10 µg/mL) GAM APC.



### Flow Cytometry

**Image 2.** Surface staining of human peripheral blood cells with anti-human CD20 (LT20) FITC.

### Flow Cytometry

**Image 3.** Separation of human CD20 positive lymphocytes (red-filled) from neutrophil granulocytes (black-dashed) in flow cytometry analysis (surface staining) of human peripheral whole blood stained using anti-human CD20 (LT20) purified antibody (concentration in sample 10  $\mu$ g/mL) GAM APC.