Datasheet for ABIN559682

anti-CD20 antibody (FITC)

3 Images | 7 Publications

Go to Product page

Overview

Quantity:	100 tests
Target:	CD20 (MS4A1)
Reactivity:	Human, Non-Human Primate
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This CD20 antibody is conjugated to FITC
Application:	Flow Cytometry (FACS)

Product Details

Immunogen:	Human tonsillar B cells
Clone:	2H7
Isotype:	IgG2b kappa
Specificity:	The mouse monoclonal antibody 2H7 recognizes an extracellular epitope on CD20 (B1, Bp35), a 33-37 kDa non-glycosylated membrane receptor with four transmembrane domains, expressed on pre-B lymphocytes, resting and activated B cells (not plasma cells), follicular dendritic cells, and at low levels on peripheral blood T lymphocytes.
Cross-Reactivity (Details):	Human, Non-Human Primates
Purification:	Purified antibody is conjugated with fluorescein isothiocyanate (FITC) under optimum conditions and unconjugated antibody and free fluorochrome are removed by size-exclusion chromatography.

Target Details

Target:	CD20 (MS4A1)
Alternative Name:	CD20 (MS4A1 Products)
Background:	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
Gene ID:	931
UniProt:	P11836

Application Details

Application Notes:	Flow cytometry: The reagent is designed for analysis of human blood cells using 20 µL reagent / 100 µL of whole blood or 10^6 cells in a suspension. The content of a vial (2 ml) is sufficient for 100 tests.
Comment:	The purified antibody is conjugated with Fluorescein isothiocyanate (FITC) under optimum conditions. The reagent is free of unconjugated FITC and adjusted for direct use. No reconstitution is necessary.
Restrictions:	For Research Use only

Handling

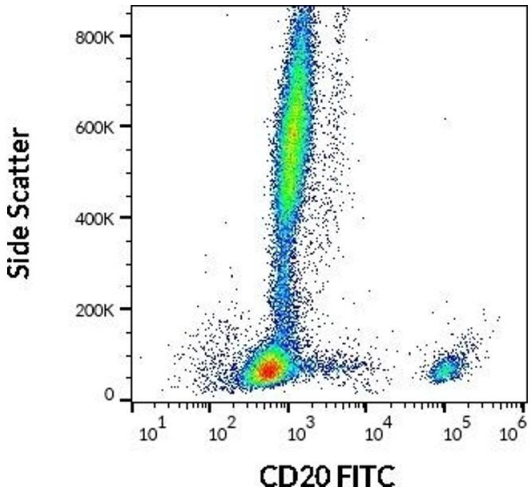
Reconstitution:	No reconstitution is necessary.
Buffer:	Stabilizing phosphate buffered saline (PBS), pH 7.4, 15 mM sodium azide
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which

Handling

	should be handled by trained staff only.
Handling Advice:	**Do not freeze.** Avoid prolonged exposure to light.
Storage:	4 °C
Storage Comment:	Store at 2-8°C. Protect from prolonged exposure to light. Do not freeze.

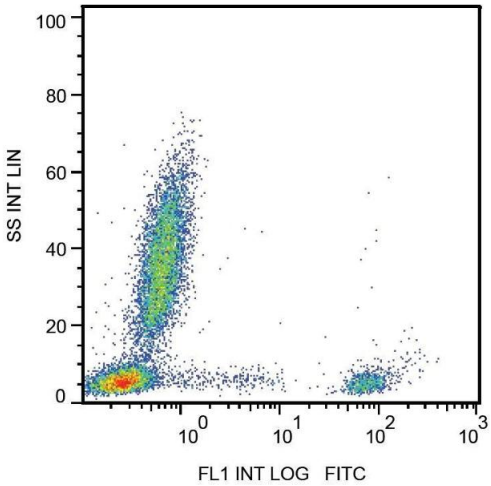
Publications

Product cited in:	Hayden-Ledbetter, Cerveny, Espling, Brady, Grosmaire, Tan, Bader, Slater, Nilsson, Barone, Simon, Bradley, Thompson, Wahl, Ledbetter: "CD20-directed small modular immunopharmaceutical, TRU-015, depletes normal and malignant B cells." in: **Clinical cancer research : an official journal of the American Association for Cancer Research**, Vol. 15, Issue 8, pp. 2739-46, (2009) (PubMed). Diehl, Schmidlin, Nagasawa, van Haren, Kwakkenbos, Yasuda, Beaumont, Scheeren, Spits: " STAT3-mediated up-regulation of BLIMP1 Is coordinated with BCL6 down-regulation to control human plasma cell differentiation." in: **Journal of immunology (Baltimore, Md. : 1950)**, Vol. 180 , Issue 7, pp. 4805-15, (2008) (PubMed). Polyak, Ayer, Szczepek, Deans: "A cholesterol-dependent CD20 epitope detected by the FMC7 antibody." in: **Leukemia**, Vol. 17, Issue 7, pp. 1384-9, (2003) (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). Rose, Smith, Maloney: "Glucocorticoids and rituximab in vitro: synergistic direct antiproliferative and apoptotic effects." in: **Blood**, Vol. 100, Issue 5, pp. 1765-73, (2002) (PubMed). There are more publications referencing this product on: Product page



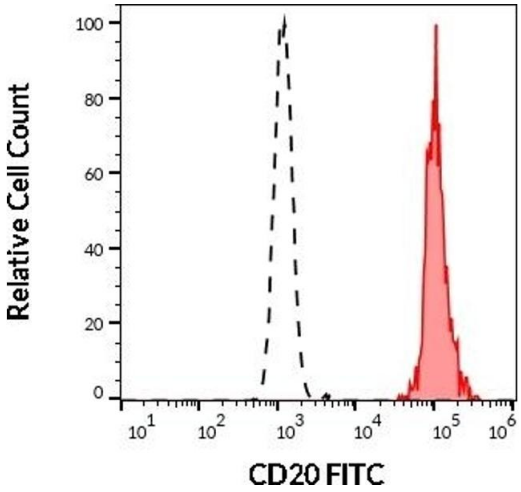
Flow Cytometry

Image 1. Flow cytometry surface staining pattern of human peripheral whole blood stained using anti-human CD20 (2H7) FITC antibody (20 µL reagent / 100 µL of peripheral whole blood).



Flow Cytometry

Image 2. Surface staining of human peripheral blood with anti-CD20 (2H7) 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 (2H7) FITC antibody (20 µL reagent / 100 µL of peripheral whole blood).

