

## Product datasheet for **SM3014AS**

### CD20 (MS4A1) Mouse Monoclonal Antibody [Clone ID: MEM-97]

#### Product data:

Product Type:	Primary Antibodies
Clone Name:	MEM-97
Applications:	FC, IP, WB
Recommended Dilution:	Flow cytometry: Recommended dilution: 1-5 µg/ml.
Reactivity:	Human, Porcine, Bovine
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Raji human Burkitt's lymphoma cell line
Specificity:	This antibody reacts with 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.
Formulation:	Azide free phosphate buffered saline (PBS), preserved by filter sterilization, approx. pH 7.4 State: Azide Free State: Liquid Ig fraction
Concentration:	lot specific
Purification:	Protein A chromatography (purity > 95% by SDS-PAGE)
Conjugation:	Unconjugated
Storage:	Store the antibody at 2 - 8 °C up to one month or (in aliquots) at -20 °C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
Gene Name:	membrane spanning 4-domains A1
Database Link:	<a href="#">Entrez Gene 931 Human P11836</a>


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**Background:**

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.

**Synonyms:**

MS4A1, Leu-16, Bp35, B-cell marker

**Product images:**

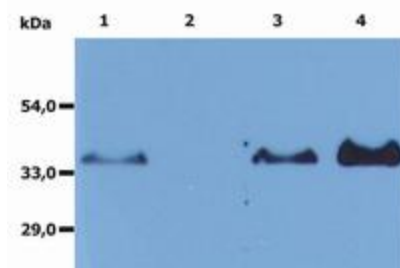
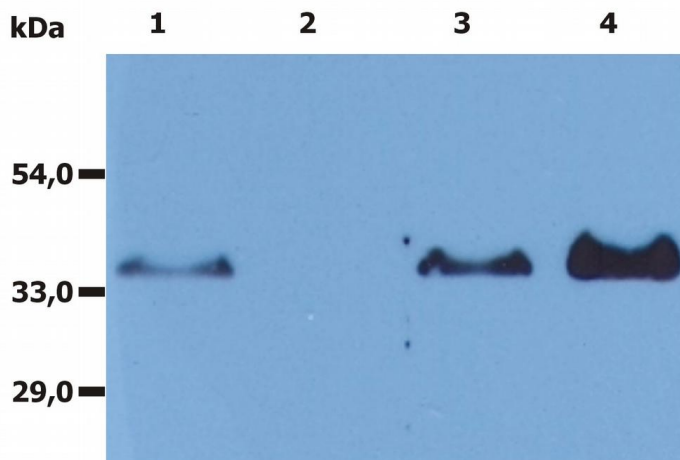
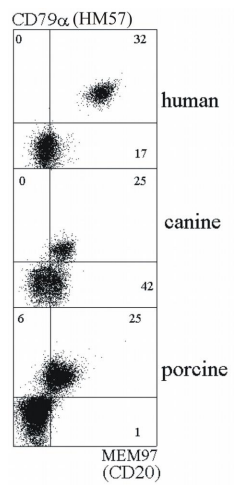


Figure 1. Immunoprecipitation of human CD20 from the whole cell lysate of RAJI human Burkitt lymphoma cell line. Western blot was immunostained with anti-CD20 rabbit polyclonal antibody. Lane 1: original lysate of RAJI cells. Lane 2: immunoprecipitate by Isotypic mouse IgG1 control ([AM03095PU-NJ]). Lane 3: original lysate of RAJI cells. Lane 4: immunoprecipitate by anti-CD20 (MEM-97)



Immunoprecipitation of human CD20 from the whole cell lysate of RAJI human Burkitt lymphoma cell line. Western blot was immunostained with anti-CD20 rabbit polyclonal antibody. Lane 1: original lysate of RAJI cells Lane 2: immunoprecipitate by Isotypic mouse IgG1 control Lane 3: original lysate of RAJI cells Lane 4: immunoprecipitate by anti-CD20 (MEM-97)



Double staining of human, canine and porcine B lymphocytes with anti-CD79a (HM57) and anti-CD20 (MEM-97) antibody.