

**BM4013****Monoclonal Antibody to B-Cells (pan) - Purified**

<b>Alternate names:</b>	B cells, B-cell marker
<b>Quantity:</b>	50 µg
<b>Concentration:</b>	0.1 mg/ml (after reconstitution)
<b>Background:</b>	B cells are lymphocytes that play a large role in the humoral immune response as opposed to the cell-mediated immune response that is governed by T cells. The abbreviation "B" comes from bursa of Fabricius that is an organ in birds in which avian B cells mature. The principal function of B cells is to make antibodies against soluble antigens. B cells are an essential component of the adaptive immune system.
<b>Host / Isotype:</b>	Mouse / IgG1
<b>Recommended Isotype Controls:</b>	SM20P (for use in rat samples), AM03095PU-N
<b>Clone:</b>	Ki-B1R
<b>Immunogen:</b>	Rat lymphocytes <b>Remarks:</b> The epitope has not been further characterized.
<b>Format:</b>	<b>State:</b> Lyophilized purified IgG fraction <b>Purification:</b> Affinity chromatography <b>Buffer System:</b> PBS, pH 7.2 with 10 mg/ml BSA as a stabilizer and 0.01% thimerosal as a preservative <b>Reconstitution:</b> Restore with 0.5 ml distilled water.
<b>Applications:</b>	<b>Immunohistochemistry on Frozen sections:</b> 1 µg/ml (1/100). <b>Immunohistochemistry on Paraffin sections:</b> 10 µg/ml (1/10). No antigen retrieval required, microwave treatment may enhance the reactivity. <i>Suggested Positive Control:</i> Rat spleen. Has been described to work in <b>FACS</b> . Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

**Specificity:**

Monoclonal Rat B-lymphocyte antibody BM4013 (clone Ki-B1R) is a pan B-cell marker useful for detecting B-lymphocytes and plasma cells in cell suspensions and tissue sections.

Ki-B1R recognises a surface antigen of 47 kD molecular weight, which appears as a single band under reducing conditions in SDS-PAGE.

The antibody is specific for Rat mature B-lymphocytes and plasma cells. Other species not tested.

**Antigen Distribution:**

**Isolated Cells:** In a test comparing the immunophenotype of rat blood lymphocytes, Ki-B1R recognised 19% +/- 3% of peripheral blood lymphocytes (n=5).

In the same test, 18% +/- 3% of the lymphocytes stained positive for sIg, whereas 79% +/- 3% stained positive with Ki-T1R, the rat pan T-cell marker.

**Tissue Sections:** Ki-B1R shows a staining pattern similar to that of anti-rat immunoglobulin markers. Follicular mantle B-lymphocytes are strongly positive whereas staining of germinal centre B-lymphocytes depends on the immunological status of the lymphoid organ. In the gastrointestinal tract, the typical mucosa-associated lymphoid tissue (MALT) selectively displays the B-follicles, mostly those containing prominent germinal centres. The reactivity pattern of Ki-B1R does not change when applied in vivo.

**Species:** Rat (mature B-lymphocytes, plasma cells).

Other species not tested.

**Storage:**

Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.

Avoid repeated freezing and thawing.

Shelf life: one year from despatch.

**Product Citations:****Purchased from Acris:**

1. Schindewolf L, Breves G, Buettner M, Hadamitzky C, Pabst R. VEGF-C improves regeneration and lymphatic reconnection of transplanted autologous lymph node fragments: An animal model for secondary lymphedema treatment. *Immun Inflamm Dis.* 2014 Nov;2(3):152-61. doi: 10.1002/iid3.32. Epub 2014 Nov 17. PubMed PMID: 25505549.

**Pictures:**

Immunohistochemical staining on rat spleen frozen sections using B Lymphocytes antibody clone Ki-B1R Cat.-No. BM4013.

