

**AM33004PU-N****Monoclonal Antibody to Granulocytes + Monocytes (Bone Marrow Cells) - Purified****Quantity:** 0.1 mg**Concentration:** 1.0 mg/ml

**Background:** Bone marrow is the flexible tissue found in the interior of bones. In humans, bone marrow in large bones produces new blood cells. On average, bone marrow constitutes 4% of the total body mass of humans; in adults weighing 65 kg, bone marrow accounts for approximately 2.6 kg. The hematopoietic compartment of bone marrow produces approximately 500 billion blood cells per day, which use the bone marrow vasculature as a conduit to the body's systemic circulation. Bone marrow is also a key component of the lymphatic system, producing the lymphocytes that support the body's immune system.

The normal bone marrow architecture can be displaced by malignancies, aplastic anemia, or infections such as tuberculosis, leading to a decrease in the production of blood cells and blood platelets. In addition, cancers of the hematologic progenitor cells in the bone marrow can arise; these are the leukemias.

Exposure to radiation or chemotherapy will kill many of the rapidly dividing cells of the bone marrow, and will therefore result in a depressed immune system. Many of the symptoms of radiation sickness are due to damage to the bone marrow cells. Bone marrow examination is the pathologic analysis of samples of bone marrow obtained by bone marrow biopsy and bone marrow aspiration.

Bone marrow examination is used in the diagnosis of a number of conditions, including leukemia, multiple myeloma, anemia, and pancytopenia. The bone marrow produces the cellular elements of the blood, including platelets, red blood cells and white blood cells. While much information can be gleaned by testing the blood itself (drawn from a vein by phlebotomy), it is sometimes necessary to examine the source of the finger cells in the bone marrow to obtain more information on hematopoiesis; this is the role of bone marrow aspiration and biopsy. The ratio between myeloid series and erythroid cells is relevant to bone marrow function, and also to diseases of the bone marrow and peripheral blood, such as leukemia and anemias. The normal myeloid-to-erythroid ratio is around 3:1; this ratio may increase in myelogenous leukemias, decrease in polycythemia, and reverse in cases of thalassemia.

**Host / Isotype:** Mouse / IgM**Recommended Isotype Controls:** SM13P**Clone:** GEPI-1**Immunogen:** Immunisation of Balb/c mice with Human bone marrow cells.**Format:** **State:** Liquid purified IgG fraction**Buffer System:** PBS**Preservatives:** 0.09% Sodium Azide

<b>Applications:</b>	<b>Flow Cytometry.</b> <b>Immunofluorescence.</b> <b>Immunoprecipitation.</b> <b>Immunohistochemistry on Frozen Sections.</b> Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
<b>Specificity:</b>	The antigen detected by the monoclonal antibody GEPI-1 is present on bone marrow cells, monocytes, myeloid cell lines and granulocytes. GEPI-1 is reactive with a sugar moiety on these cells. GEPI-1 recognizes a determinant present predominantly on cells of the myeloid lineage, whereas it does not affect the adhesive properties of these cells.
<b>Species Reactivity:</b>	<b>Tested:</b> Human.
<b>Storage:</b>	Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freeze-thaw cycles. Shelf life: One year from despatch.
<b>General Readings:</b>	1. Keizer GD, Figdor CG, De Vries JE. Sensitive and quantitative determination of monocyte adherence. J Immunol Methods. 1986 Dec 4;95(1):141-7. PubMed PMID: 3782823. 2. G.D. Keizer, A.A. te Velde, W. Visser and C.G. Figdor. Advances in Biosciences, Vol. 66. Pergamon Press, page 477, 1987.