EXBIO Antibodies

PRODUCT DATA SHEET

1P-157-T025

Monoclonal Antibody to CD114 / G-CSFR Phycoerythrin (PE) conjugated (25 tests)

Clone: LMM741

Isotype: Mouse IgG1

Specificity: The mouse monoclonal antibody LMM741 recognizes CD114 (colony stimulating factor 3 receptor), a 130 kDa transmembrane glycoprotein expressed on granulocytes and their differentiation stages, on monocytes, platelets, endothelial cells and placenta. It is absent from lymphocytes and erythrocytes.
HLDA VI; WS Code MA98

Regulatory Status: RUO

Immunogen: CHO cells transfected with human CD114

Species Reactivity: Human

Negative Species: Mouse

Preparation: The purified antibody is conjugated with R-Phycoerythrin (PE) under optimum conditions. The conjugate is purified by size-exclusion chromatography and adjusted for direct use. No reconstitution is necessary.

Storage Buffer: The reagent is provided in stabilizing phosphate buffered saline (PBS) solution containing 15mM sodium azide.

Storage / Stability: Store in the dark at 2-8ºC. Do not freeze. Avoid prolonged exposure to light. Do not use after expiration date stamped on vial label.

Usage: The reagent is designed for Flow Cytometry analysis of human blood cells using 10 µl reagent / 100 µl of whole blood or 10^6 cells in a suspension.
The content of a vial (0.25 ml) is sufficient for 25 tests.

Expiration: See vial label

Lot Number: See vial label

Background: CD114 / G-CSFR (granulocyte colony-stimulating factor receptor, also known as CSF3R) is a type I transmembrane glycoprotein which upon binding of its ligand (G-CSF, granulocyte colony-stimulating factor) homodimerizes and activates signaling transduction to mediate cell proliferation, survival, and differentiation. It is expressed by granulocytes at all stages of their differentiation, as well as by monocytes, dendritic cells, and mature platelets. Among non-hematopoietic cells, it is expressed e.g. by endothelial cells, placenta, trophoblasts, and many tumor cell lines. This antigen is a target for stem cell mobilization for blood stem cell transplantation, for enhancing recovery of myelopoiesis following chemotherapy and in the treatment of patients with severe chronic neutropenia.

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References:

*Layton JE, Iaria J, Smith DK, Treutlein HR: Identification of a ligand-binding site on the granulocyte colony-stimulating factor receptor by molecular modeling and mutagenesis. J Biol Chem. 1997 Nov 21;272(47):29735-41.

*Layton JE, Shimamoto G, Osslund T, Hammacher A, Smith DK, Treutlein HR, Boone T: Interaction of granulocyte colony-stimulating factor (G-CSF) with its receptor. Evidence that Glu19 of G-CSF interacts with Arg288 of the receptor. J Biol Chem. 1999 Jun 18;274(25):17445-51.

*Layton JE, Hall NE, Connell F, Venhorst J, Treutlein HR: Identification of ligand-binding site III on the immunoglobulin-like domain of the granulocyte colony-stimulating factor receptor. J Biol Chem. 2001 Sep 28;276(39):36779-87.

*Gibbs KD Jr, Gilbert PM, Sachs K, Zhao F, Blau HM, Weissman IL, Nolan GP, Majeti R: Single-cell phospho-specific flow cytometric analysis demonstrates biochemical and functional heterogeneity in human hematopoietic stem and progenitor compartments. Blood. 2011 Apr 21;117(16):4226-33. doi: 10.1182/blood-2010-07-298232.

*Tchou J, Zhang PJ, Bi Y, Satija C, Marjumdar R, Stephen TL, Lo A, Chen H, Mies C, June CH, Conejo-Garcia J, Puré E: Fibroblast activation protein expression by stromal cells and tumor-associated macrophages in human breast cancer. Hum Pathol. 2013 Nov;44(11):2549-57.

*Cimato TR, Palka BA, Lang JK, Young RF: LDL cholesterol modulates human CD34+ HSPCs through effects on proliferation and the IL-17 G-CSF axis. PLoS One. 2013 Aug 26;8(8):e73861.

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