PE anti-human CD114 (G-CSFR) Antibody

Catalog# / Size	346105 / 25 tests 346106 / 100 tests
Clone	LMM741
Workshop	VI MA98
Other Names	CSF3R, HG-CSFR, Colony Stimulating Factor 3 receptor
Isotype	Mouse IgG1, κ
Description	CD114 is the receptor of the colony stimulating factor 3 (CSF3, G-CSF), consist of two 130 kD, type I transmembrane chains that form a homodimer. The extracellular domain consists of an immunoglobulin-like domain, a cytokine receptor homologue domain, and three fibronectin type III repeats. CD114 is expressed in all stages of granulocyte differentiation and in monocytes, platelets, endothelial cells, placenta and trophoblasts. The binding of CSF3, results in the activation of many signaling molecules such as Syk, Lyn, Jak1, Jak2, Tyk2, SOCS3, SOCS1, STAT5, and Shp1, resulting in the expression of different target genes that will increase neutrophil precursor survival, proliferation and maturation. In mature neutrophils, it increases survival, superoxide anion generation, arachidonic acid release, production of myeloperoxidase and leukocyte alkaline phosphatase (LAP).

Product Details

Reactivity	Human, Cynomolgus
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	CHO cells transfected with hG-CSFR
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA).
Preparation	The antibody was purified by affinity chromatography, and conjugated with PE under optimal conditions.
Concentration	Lot-specific (please contact technical support for concentration and total µg amount, or use our Lookup tool if you have a lot number.)
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. **Do not freeze.**
Application	FC - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is 5 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Application References **(PubMed link indicates BioLegend citation)**	1. Layton JE, et al. 1997. Growth Factors. 14:117 2. Layton JE, et al. 1999. J. Biol. Chem. 274:17445 3. Layton JE, et al. 2001. J. Biol. Chem. 276:36779 4. Bunse CE, et al. 2013. PLoS One. 8:77925. PubMed
Product Citations	1. Bunse C, et al. 2013. PLoS One. 8:77925. PubMed 2. Zimmermann M, et al. 2016. Sci Rep. 6:19674. PubMed
RRID	AB_1967117 (BioLegend Cat. No. 346105) AB_2083867 (BioLegend Cat. No. 346106)

Antigen Details

Structure	Single chain type I transmembrane molecule of 130 kD. The extracellular domain consists of an immunoglobulin-like domain, a cytokine receptor homologue domain, and three fibronectin type III repeats. To function as a receptor, this molecules form a homod
Distribution	Granulocytes (in all stages of differentiation), monocytes, platelets, endothelial cells, placenta and trophoblasts.
Function	Stimulates survival, proliferation, and maturation of neutrophil precursors. In mature neutrophils increases survival, superoxide anion generation, arachidonic acid release, production of myeloperoxidase and leukocyte alkaline phosphatase (LAP).
Interaction	Syk, Lyn, Jak1, Jak2, Tyk2, SOCS3, SOCS1, STAT5, Shp1.
Ligand/Receptor	CSF3(G-CSF)
Bioactivity	Stimulate the proliferation and differentiation of neutrophils precursors and the activation of mature neutrophils.
Cell Type	Granulocytes, Monocytes, Platelets, Endothelial cells, Neutrophils
Biology Area	Immunology, Innate Immunity
Molecular Family	Adhesion Molecules, CD Molecules, Cytokine/Chemokine Receptors
Antigen References	1. Starnes LM, et al. 2009. Blood 114:1753 2. Skokowa J, et al. 2009. Nat Med. 15:151 3. Ai J, et al. 2008. PLoS One. 3:e3422 4. Germeshausen M, et al. 2008. Curr Opin Hematol. 15:332 5. Marino VJ, Roguin LP, et al. 2008. J Cell Biochem. 103:1512 6. Irandoust MI, et al. 2007. EMBO J. 2:1782
Gene ID	1441

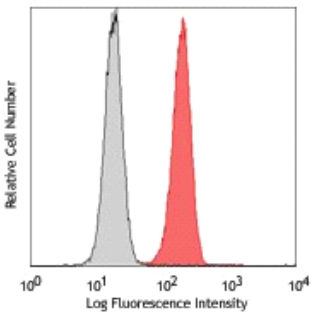
Related Protocols

Cell Surface Flow Cytometry Staining Protocol

Other Formats

APC anti-human CD114 (G-CSFR), PerCP/Cyanine5.5 anti-human CD114 (G-CSFR)

Product Data



Human peripheral blood granulocytes stained with LMM741 PE

8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587