PE anti-human CXCL1 (GROα) Antibody

Catalog# / Size	310108 / 25 tests 310109 / 100 tests
Clone	A19037I
Regulatory Status	RUO
Other Names	Fibroblast secretory protein (FSP), Growth regulated oncogene 1 (GRO1), Growth regulated oncogene a (GRO a), Growth-regulated alpha protein, melanoma growth stimulating activity (MGSA), MGSA-α, neutrophil activating protein 3 (NAP-3), SCYB1
Isotype	Mouse IgG2b, κ
Description	CXCL1, also known as GROα, is an ELR+ CXC chemokine that is structurally and functionally related to CXCL2 (GRO2), CXCL3 (GRO3), and CXCL8 (IL-8). CXCL1, CXCL3, and IL-8 bind to the CXCR2 receptor (CD182) with CXCL1 (GROα) having the highest affinity. CXCL1 has pleiotropic effects on cell proliferation, tumor angiogenesis, invasion, and metastasis and is crucial for the recruitment of neutrophils to inflammatory sites. CXCL1 is frequently overexpressed in many cancers, such as breast cancer, ovarian cancer, colorectal cancer, prostate cancer, and squamous cell carcinoma. Thrombin enhances the secretion of CXCL1 from tumor cells, and these two molecules together induce vascular regulatory proteins and growth factors involved in angiogenesis; this parallels the activity of VEGF, Ang-2, CD31, KDR, CXCR2, MMP1, and MMP2 in HUVEC cells. In addition, PGE2 stimulates expression of CXCL1 in human colorectal carcinoma (CRC) cells through activation of an EGFR-MAPK. CXCL1 (secreted by CRC cells) induces endothelial cell migration and tube formation and is induced by inflammatory cytokines such as IL-1 and TNF. In addition, IL-17A enhances expression of CXCL1 by prolonging the half-life of its constitutively unstable mRNA.

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Recombinant human CXCL1
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with PE under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our Certificate of Analysis online tool.)
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	ICFC - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by intracellular flow cytometry using our Cyto-Fast™ Fix/Perm Buffer Set. For flow cytometric staining, the suggested use of this reagent is 5 µL per 10^6 cells in 100 µl volume. It is highly recommended that the reagent be titrated for optimal performance for each application.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
RRID	AB_3698964 (BioLegend Cat. No. 310108) AB_3698964 (BioLegend Cat. No. 310109)

Antigen Details

Structure	Chemokine
Distribution	CXCL1 is produced by neutrophils, activated monocytes, fibroblasts, epithelial cells, and endothelial cells
Function	CXCL1 chemoattracts neutrophils and induces cell proliferation, tumor angiogenesis, invasion, and metastasis. CXCL1 is induced by LPS, IL-1, TNF, thrombin, and PGE2.
Interaction	Neutrophils and endothelial cells
Ligand/Receptor	CXCR2
Molecular Family	Cytokines/Chemokines
Antigen References	1. Anisowicz A, *et al*. 1987. *P. Natl. Acad. Sci*. USA 84:7188-92. 2. Caunt M, *et al*. 2006. *Cancer Res*. 66:4125-32. 3. Wang D, *et al*. 2006. *J Exp Med*. 203:941-51. 4. Datta S, *et al*. 2010. *J Immunol*. 184:1484-91.
Gene ID	2919

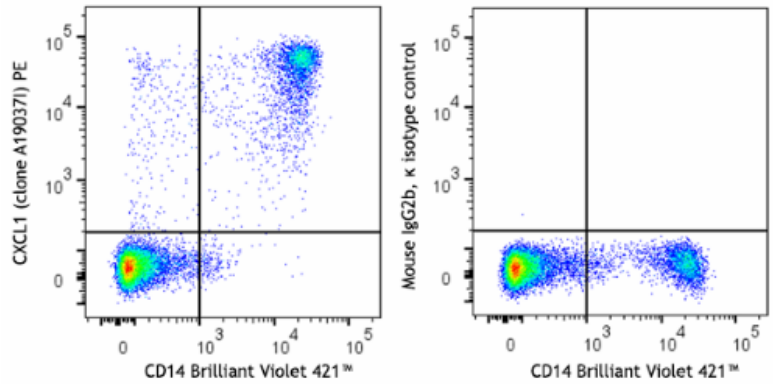
Related Protocols

- Intracellular Flow Cytometry Staining Protocol

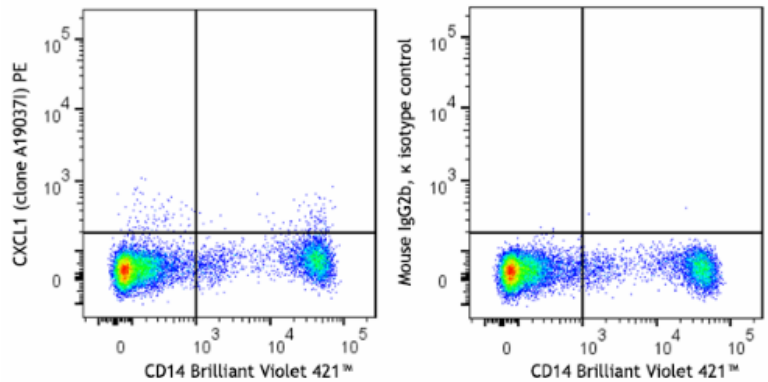
Other Formats

PE anti-human CXCL1 (GROα), Purified anti-human CXCL1 (GROα)

Product Data



Human peripheral blood mononuclear cells were stimulated with LPS (6 hours, in the presence of monensin). Cells were fixed and permeabilized with Cyto-Fast™ Fix/Perm Buffer (Cat. No. 426803) and intracellularly stained with anti-human CD14 (clone HCD14) Brilliant Violet 421™ and anti-human CXCL1 (GROα) (clone A19037I) PE or mouse IgG2b, κ PE isotype control (right).



Unstimulated human peripheral blood mononuclear cells were fixed and permeabilized with Cyto-Fast™ Fix/Perm Buffer (Cat. No. 426803) and intracellularly stained with anti-human CD14 (clone HCD14) Brilliant Violet 421™ and anti-human CXCL1 (GROα) (clone A19037I) PE or mouse IgG2b, κ PE isotype control (right).

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