GMP PE anti-human CD117 (c-kit) Antibody

Catalog# / Size	260124 / 100 tests
Clone	104D2
Other Names	Stem cell factor receptor, c-kit, mast cell growth factor receptor, steel factor receptor
Isotype	Mouse IgG1, κ
Description	CD117 is a 145 kD protein tyrosine kinase also known as c-Kit. It is a receptor for stem cell factor or c-Kit ligand. CD117 is expressed on pluripotent hematopoietic progenitor cells (approximately 1-4% bone marrow cells), mast cells, and acute myeloid leukemia cells (AML). CD117 binding of c-Kit ligand induces phosphorylation of CD117 and stimulates proliferation and survival of primitive hematopoietic stem cells as well as erythroid-committed and granulo-monocytic committed cells.

Product Details

Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	MOLM-1 megakaryocytic cell line
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	100 μg/mL
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. It is 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)
Application Notes	The 104D2 antibody does not block binding of c-Kit ligand. Additional reported applications (for the relevant formats) include: immunoprecipitation[1], immunofluorescence microscopy[1], and spatial biology (IBEX)[4,5].
Application References **(PubMed link indicates BioLegend citation)**	1. Broudy VC, *et al.* 1999. *Blood* 94:1979. (IF, IP) 2. Yoshino N, *et al.* 2000. *Exp. Anim. (Tokyo)* 49:97. (FC) 3. Nagano M, *et al.* 2007. *Blood* 110:151. (FC) PubMed 4. Radtke AJ, *et al.* 2020. *Proc Natl Acad Sci U S A.* 117:33455-65. (SB) PubMed 5. Radtke AJ, *et al.* 2022. *Nat Protoc.* 17:378-401. (SB) PubMed
Disclaimer	**GMP RUO Flow Cytometry Antibodies.** BioLegend GMP RUO fluorophore conjugated antibodies are manufactured in a dedicated GMP facility and compliant with ISO 13485:2016. For research use only. Not for use in diagnostic or therapeutic procedures. Our processes include: - Batch-to-batch consistency - Material traceability - Documented procedures - Documented employee training - Equipment maintenance and monitoring records

Antigen Details

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Structure	Growth factor receptor with tyrosine kinase activity, subclass III, approximately 145 kD
Distribution	Pluripotent hematopoietic progenitor cells (approximately 1-4% bone marrow cells), mast cells, acute myeloid leukemic cells (AML)
Function	Growth factor receptor for stem cell factor. Induces proliferation and survival of primitive hematopoietic progenitors. Potent inducer of proliferation in erythroid-committed progenitor cells. Defects in CD117 have been linked to severe anemia and a decreased number of hematopoietic progenitor cells.
Ligand/Receptor	c-Kit ligand
Cell Type	Endothelial cells, Hematopoietic stem and progenitors, Leukemia, Mast cells, Mesenchymal Stem Cells
Biology Area	Immunology, Stem Cells
Molecular Family	CD Molecules
Antigen References	1. Giebel LB, *et al.* 1992. *Oncogene* 7:2207. 2. Furitsu T, *et al.* 1993. *J. Clin. Invest.* 92:1736.
Gene ID	3815

Related Protocols

Cell Surface Flow Cytometry Staining Protocol

Other Formats

Purified anti-human CD117 (c-kit), PE anti-human CD117 (c-kit), APC anti-human CD117 (c-kit), Biotin anti-human CD117 (c-kit), PE/Cyanine5 anti-human CD117 (c-kit), PE/Cyanine7 anti-human CD117 (c-kit), PerCP/Cyanine5.5 anti-human CD117 (c-kit), Brilliant Violet 421™ anti-human CD117 (c-kit), Brilliant Violet 605™ anti-human CD117 (c-kit), Brilliant Violet 510™ anti-human CD117 (c-kit), Brilliant Violet 650™ anti-human CD117 (c-kit), Purified anti-human CD117 (c-kit) (Maxpar® Ready), PE/Dazzle™ 594 anti-human CD117 (c-kit), APC/Cyanine7 anti-human CD117 (c-kit), Brilliant Violet 711™ anti-human CD117 (c-kit), FITC anti-human CD117 (c-kit), Alexa Fluor® 488 anti-human CD117 (c-kit), Alexa Fluor® 647 anti-human CD117 (c-kit), APC/Fire™ 750 anti-human CD117 (c-kit), Brilliant Violet 785™ anti-human CD117 (c-kit), TotalSeq™-A0061 anti-human CD117 (c-kit), TotalSeq™-C0061 anti-human CD117 (c-kit), TotalSeq™-B0061 anti-human CD117 (c-kit), Alexa Fluor® 700 anti-human CD117 (c-kit), Spark NIR™ 685 anti-human CD117 (c-kit) Antibody, APC/Fire™ 750 anti-human CD117 (c-kit), TotalSeq™-D0061 anti-human CD117 (c-kit)

Product Data
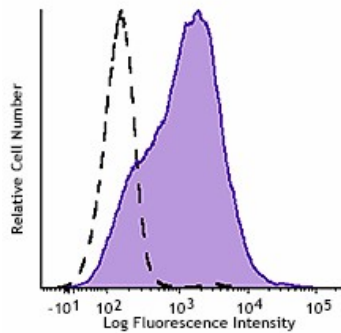
Typical results from human erythroleukemia cell line TF-1 stained either with 104D2 PE used at 5 µL/test (filled histogram) or with an isotype control (open histogram).

Symbols Glossary*

Symbol	Meaning	Symbol Title	Symbol No.	Symbol	Meaning	Symbol Title	Symbol No.
REF	Catalog number	Catalogue number	5.1.6	[book with i]	Indicates the need for the user to consult the instructions for use.	Consult instructions for use	5.4.3
[thermometer]	Indicates the temperature limits to which the medical device can be safely exposed.	Temperature limit	5.3.7	[sun]	Indicates a medical device that needs protection from light sources.	Keep away from sunlight	5.3.2
[thermometer]	Indicates the upper limit of temperature to which the medical device can be safely exposed.	Upper limit of temperature	5.3.6	[hourglass]	Indicates the date after which the medical device is not to be used.	Use-by date	5.1.4
[factory]	Indicates the medical device manufacturer.	Manufacturer	5.1.1	EC REP	Indicates the authorized representative in the European Community.	Authorized representative in the European Community	5.1.2
LOT	Indicates the manufacturer's batch code so that the batch or lot can be identified.	Batch code	5.1.5	IVD	Indicates a medical device that is intended to be used as an in vitro diagnostic medical device.	In vitro diagnostic medical device	5.5.1

* Symbol information is from EN ISO 15223-1:2016 Medical devices – Symbols to be used with medical device labels, labelling and information to be supplied – Part 1: General requirements

BioLegend Inc., 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