

PE/Dazzle™ 594 anti-human CD117 (c-kit) Antibody

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| Catalog# / Size | 313225 / 25 tests 313226 / 100 tests |
| Clone | 104D2 |
| Regulatory Status | RUO |
| 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 granulomonocytic committed cells. |

Product Details

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| Verified Reactivity | Human |
| Reported Reactivity | Cynomolgus, Cow |
| 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 BSA (origin USA) |
| Preparation | The antibody was purified by affinity chromatography and conjugated with PE/Dazzle™ 594 under optimal conditions. |
| Concentration | Lot-specific (to obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.) |
| 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. * PE/Dazzle™ 594 has a maximum excitation of 566 nm and a maximum emission of 610 nm. |
| 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 | 1. Broudy VC, <i>et al.</i> 1999. <i>Blood</i> 94:1979. (IF, IP) 2. Yoshino N, <i>et al.</i> 2000. <i>Exp. Anim. (Tokyo)</i> 49:97. (FC) 3. Nagano M, <i>et al.</i> 2007. <i>Blood</i> 110:151. (FC) PubMed 4. Radtke AJ, <i>et al.</i> 2020. <i>Proc Natl Acad Sci U S A.</i> 117:33455-65. (SB) PubMed 5. Radtke AJ, <i>et al.</i> 2022. <i>Nat Protoc.</i> 17:378-401. (SB) PubMed |
| Product Citations | 1. Wang J, <i>et al.</i> 2020. <i>Cell.</i> 183(7):1867-1883.e26. PubMed 2. Wang F, <i>et al.</i> 2021. <i>Cell.</i> 184(2):422-440.e17. PubMed |

RRID

AB_2566212 (BioLegend Cat. No. 313225)
AB_2566213 (BioLegend Cat. No. 313226)

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 |
| Modification | Multiple phosphorylation sites |
| Cell Type | Embryonic Stem 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, <i>et al.</i> 1992. <i>Oncogene</i> 7:2207. 2. Furitsu T, <i>et al.</i> 1993. <i>J. Clin. Invest.</i> 92:1736. |
| Gene ID | 3815 |

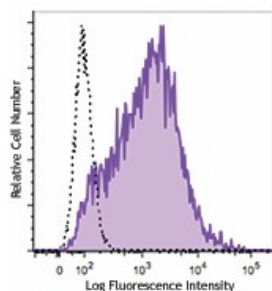
Related Protocols

[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), GMP APC anti-human CD117 (c-kit), GMP PE anti-human CD117 (c-kit)

Product Data



Human erythroleukemia cell line (HEL) was stained with CD117 (clone 104D2) PE/Dazzle™ 594 (filled histogram) or mouse IgG1, κ PE/Dazzle™ 594 isotype control (open histogram).

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