

Alexa Fluor[®] 700 anti-mouse CD117 (c-Kit) Antibody

Catalog# / Size	105845 / 25 µg 105846 / 100 µg
Clone	2B8
Regulatory Status	RUO
Other Names	c-KIT, Stem Cell Factor Receptor (SCFR)
Isotype	Rat IgG2b, κ
Description	CD117 is a 145 kD immunoglobulin superfamily member also known as c-Kit and stem cell factor receptor (SCFR). It is a transmembrane tyrosine-kinase receptor that binds the c-Kit ligand (also known as steel factor, stem cell factor, and mast cell growth factor). CD117 is expressed on hematopoietic stem cells (including multipotent hematopoietic stem cells, progenitors committed to myeloid and/or erythroid lineages, and T and B cell precursors), mast cells, and acute myeloid leukemia (AML) cells. CD117 interaction with its ligand is critical for the development of hematopoietic stem cells.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Mouse bone marrow mast cells
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor [®] 700 under optimal conditions.
Concentration	0.5 mg/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	<p>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 ≤ 0.5 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.</p> <p>* Alexa Fluor[®] 700 has a maximum emission of 719 nm when it is excited at 633 nm / 635 nm. Prior to using Alexa Fluor[®] 700 conjugate for flow cytometric analysis, please verify your flow cytometer's capability of exciting and detecting the fluorochrome.</p> <p>Alexa Fluor[®] and Pacific Blue™ are trademarks of Life Technologies Corporation.</p> <p>View full statement regarding label licenses</p>
Excitation Laser	Red Laser (633 nm)
Application Notes	Additional reported applications (for the relevant formats) include: immunoprecipitation ¹ , immunohistochemistry of acetone fixed frozen sections ² , and spatial biology (IBEX) ^{5,6} . The 2B8 antibody does not block c-Kit activity.
Application References	<ol style="list-style-type: none">Ikuta K, <i>et al.</i> 1992. <i>P. Natl. Acad. Sci. USA</i> 89:1502. (FC)Podd BS, <i>et al.</i> 2006. <i>J. Immunol.</i> 176:6532. PubMed (IHC)Bachelet I, <i>et al.</i> 2008. <i>J. Immunol.</i> 180:6064. PubMed (FC)Charles N, <i>et al.</i> 2010. <i>Nat. Med.</i> 16:701. PubMed (FC)Radtke AJ, <i>et al.</i> 2020. <i>Proc Natl Acad Sci U S A.</i> 117:33455-65. (SB) PubMed
(PubMed link indicates BioLegend citation)	

6. Radtke AJ, *et al.* 2022. *Nat Protoc.* 17:378-401. (SB) [PubMed](#)

Product Citations

1. McCallion A, *et al.* 2022. *Front Immunol.* 13:961599. [PubMed](#)
2. Ramakrishnan R, *et al.* 2020. *Cell Reports.* 31(8):107684. [PubMed](#)

RRID

AB_2783045 (BioLegend Cat. No. 105845)
AB_2783046 (BioLegend Cat. No. 105846)

Antigen Details

Structure	Ig superfamily, 145 kD
Distribution	Hematopoietic stem cells, AML, mast cells
Function	Growth factor receptor, tyrosine kinase
Ligand/Receptor	Stem Cell Factor (SCF)
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	<ol style="list-style-type: none">1. Barclay A, <i>et al.</i> 1997. <i>The Leukocyte Antigen FactsBook</i> Academic Press.2. Galli SJ, <i>et al.</i> 1994. <i>Adv. Immunol.</i> 55:1.3. Ikuta K, <i>et al.</i> 1992. <i>Annu. Rev. Immunol.</i> 10:759.4. Besmer P, <i>et al.</i> 1986. <i>Nature</i> 320:415.5. Witte ON. 1990. <i>Cell</i> 63:5.
Gene ID	16590

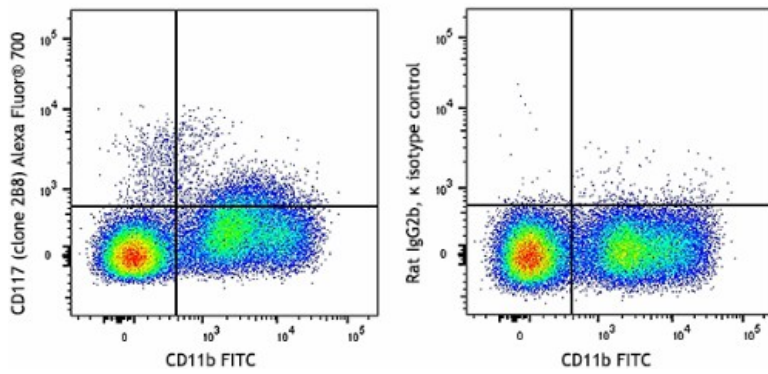
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

Other Formats

APC anti-mouse CD117 (c-Kit), Biotin anti-mouse CD117 (c-Kit), FITC anti-mouse CD117 (c-Kit), PE anti-mouse CD117 (c-Kit), PE/Cyanine5 anti-mouse CD117 (c-Kit), Purified anti-mouse CD117 (c-Kit), PE/Cyanine7 anti-mouse CD117 (c-Kit), Alexa Fluor® 488 anti-mouse CD117 (c-Kit), Alexa Fluor® 647 anti-mouse CD117 (c-Kit), Pacific Blue™ anti-mouse CD117 (c-Kit), PerCP/Cyanine5.5 anti-mouse CD117 (c-kit), PerCP anti-mouse CD117 (c-kit), APC/Cyanine7 anti-mouse CD117 (c-kit), Brilliant Violet 421™ anti-mouse CD117 (c-Kit), Purified anti-mouse CD117 (c-Kit) (Maxpar® Ready), PE/Dazzle™ 594 anti-mouse CD117 (c-Kit), Brilliant Violet 711™ anti-mouse CD117 (c-Kit), Alexa Fluor® 594 anti-mouse CD117 (c-Kit), APC/Fire™ 750 anti-mouse CD117 (c-Kit), Brilliant Violet 510™ anti-mouse CD117 (c-Kit), Brilliant Violet 785™ anti-mouse CD117 (c-Kit), TotalSeq™-A0012 anti-mouse CD117 (c-kit), Brilliant Violet 605™ anti-mouse CD117 (c-Kit), Alexa Fluor® 700 anti-mouse CD117 (c-Kit), TotalSeq™-B0012 anti-mouse CD117 (c-Kit), TotalSeq™-C0012 anti-mouse CD117 (c-Kit), Spark NIR™ 685 anti-mouse CD117 (c-kit), Brilliant Violet 650™ anti-mouse CD117 (c-kit)

Product Data



C57BL/6 mouse bone marrow cells were stained with CD11b FITC and CD117 (clone 2B8) Alexa Fluor® 700 (left) or rat IgG2b, κ Alexa Fluor® 700 isotype control (right). Data shown was gated on total cell population.

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