

APC anti-mouse CD117 (c-kit) Antibody

Catalog# / Size	135107 / 25 µg 135108 / 100 µg
Clone	ACK2
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

Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Murine IL-3 dependent 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 APC under optimal conditions.
Concentration	0.2 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	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 ≤1.0 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application.
Excitation Laser	Red Laser (633 nm)
Application Notes	<p>Injection of ACK2 in mice of NOD genetic background is not recommended as mice develop immediate anaphylaxis, resulting in animal death. Treatment is possible with co-injection of Benadryl.³</p> <p>ACK2 has been reported to block c-Kit function. The LEAF™ purified antibody (Endotoxin <0.1 EU/µg, Azide-Free, 0.2 µm filtered) is recommended for functional assays (Cat. No. 135103). For highly sensitive assays, we recommend Ultra-LEAF™ purified antibody (Cat. No. 135114) with a lower endotoxin limit than standard LEAF™ purified antibodies (Endotoxin <0.01 EU/µg).</p>
Application References	<ol style="list-style-type: none"> 1. Yoshinaga K, et al. 1991. Development 113:689. 2. Broudy VC, et al. 1996. Blood 88:75. 3. Louvet C, et al. 2008. Proc. Natl. Acad. Sci. USA 105:18895.
(PubMed link indicates BioLegend citation)	
Product Citations	<ol style="list-style-type: none"> 1. Arnold I, et al. 2011. J Immunol. 186:6165. PubMed 2. Hitzler I, et al. 2012. J Immunol. 188:3594. PubMed 3. Sachs N, et al. 2012. Proc Natl Acad Sci U S A. 109:21468. PubMed 4. Orlanski S, et al. 2016. Proc Natl Acad Sci U S A. 113: 5018-5023. PubMed 5. Reismann D, et al. 2017. Nat Commun.. 10.1038/s41467-017-01538-9. PubMed 6. Wang X, et al. 2018. Cell Death Dis. 9:578. PubMed 7. LaFleur MW, et al. 2019. Nat Commun. 10:1668. PubMed 8. Schoeler K, et al. 2019. FEBS J. 10.1111/febs.14934. PubMed
RRID	AB_2028405 (BioLegend Cat. No. 135107)

Antigen Details

Structure	Ig superfamily, 145 kD
Distribution	Hematopoietic stem cells, AML, mast cells, oocytes, interstitial theca cells, leydig cells
Function	Growth factor receptor, tyrosine kinase
Ligand/Receptor	Stem Cell Factor (SCF)
Cell Type	Embryonic Stem Cells, Mesenchymal Stem Cells
Biology Area	Immunology, Stem Cells
Molecular Family	CD Molecules
Antigen References	<ol style="list-style-type: none"> 1. Barclay A et al. 1997. The Leukocyte Antigen FactsBook Academic Press. 2. Galli SJ. et al. 1994. Adv. Immunol. 55:1. 3. Ikuta K et al. 1992. Annu. Rev. Immunol. 10:759. 4. Besmer P et al. 1986. Nature 320:415. 5. Witte ON. et al. 1990. Cell 63:5.
Gene ID	16590

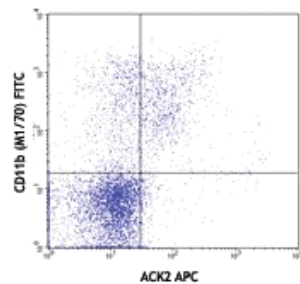
Related Protocols

[Cell Surface Flow Cytometry Staining Protocol](#)

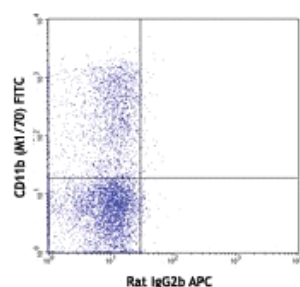
Other Formats

Purified anti-mouse CD117 (c-kit), LEAF™ Purified anti-mouse CD117 (c-kit), PE anti-mouse CD117 (c-kit), PE/Cyanine7 anti-mouse CD117 (c-kit), Ultra-LEAF™ Purified anti-mouse CD117 (c-kit), Alexa Fluor® 488 anti-mouse CD117 (c-kit), FITC anti-mouse CD117 (c-kit), Brilliant Violet 510™ anti-mouse CD117 (c-kit), Brilliant Violet 605™ anti-mouse CD117 (c-kit), Brilliant Violet 421™ anti-mouse CD117 (c-kit), Brilliant Violet 650™ anti-mouse CD117 (c-kit), PE/Dazzle™ 594 anti-mouse CD117 (c-kit), Biotin anti-mouse CD117 (c-kit), PerCP/Cyanine5.5 anti-mouse CD117 (c-kit), APC/Cyanine7 anti-mouse CD117 (c-kit), Brilliant Violet 785™ anti-mouse CD117 (c-kit)

Product Data



C57BL/6 bone marrow cells stained with ACK2 APC and CD11b (M1/70) FITC



C57BL/6 bone marrow cells stained with rat IgG2b APC isotype control and CD11b (M1/70) FITC

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