

Product Information

Contents: Affinity Purified anti-mouse CD117 (c-Kit, cKit) - neutralizing

Catalog Number: 14-1172

Sizes: 50 ug, 100 ug, 500 ug

Formulation: Phosphate buffer pH 7.2,
150 mM NaCl, 0.09% NaN₃

Storage Conditions: Store at 4°C.

Avoid repeated freeze/thaw cycles.

Clone: ACK2

Isotype: Rat IgG2b, κ

Available Formats of This Product

Cat. No.	Format	Excite (nm)	Emit (nm)	Reported Applications
10-1172	APC-Cy7 anti-mouse CD117 (c-Kit, cKit)	633	760	FC
12-1172	PE anti-mouse CD117 (c-Kit, cKit)	488	575	FC
14-1172	Affinity Purified anti-mouse CD117 (c-Kit, cKit) - neutralizing	N/A	N/A	FA FC IH/F IP WB
15-1172	PE-Cy5 anti-mouse CD117 (c-Kit, cKit)	488	670	FC
16-1172	Functional Grade* Purified anti-mouse CD117 (c-Kit, cKit) - neutralizing	N/A	N/A	FA FC
17-1172	APC anti-mouse CD117 (c-Kit, cKit)	633	660	FC
25-1172	Phycoerythrin-Cy7 (PE-Cy7) anti-mouse CD117 (c-Kit, cKit) - neutralizing	488	760	FC

*Functional Grade™ (FG™): Azide-free, sterile-filtered, and endotoxin < 0.001 ng/μg.
Purified: Contains azide, not sterile-filtered, and not endotoxin tested.

Description

The ACK2 monoclonal antibody reacts with mouse CD117, also known as c-Kit receptor, Steel factor receptor and stem cell factor receptor. A member of the tyrosine kinase receptor family, this 145 kDa molecule is expressed by a majority of hematopoietic progenitor cells characterized in the mouse bone marrow as a small subset of cells positive for Sca-1 and Thy1 (Thy1^{lo}) and negative for lineage markers. The interaction of the mouse c-kit receptor and steel factor promotes the proliferation and differentiation of hematopoietic progenitor cells. CD117 is also expressed by mast cells and plays a role in signaling and activation of these cells. ACK2 has been reported to be a blocking antibody.

Usage

For research use only, not for diagnostic or therapeutic use. The ACK2 antibody has been reported for use in flow cytometric analysis, immunoprecipitation, immunoblotting (WB), and immunohistochemical staining of frozen tissue sections. It has also been reported for use in functional assays. (Please use Functional Grade purified ACK2, cat. 16-1172, in functional assays.)

Applications Tested

The ACK2 antibody has been tested by flow cytometric analysis of mouse bone marrow cell suspensions. This can be used at less than or equal to 0.125 μg per million cells in a 100 μl total staining volume. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

Related Products

Cat. 10-1172 APC-Cy7 anti-mouse CD117 (c-Kit, cKit) (clone ACK2)

Cat. 12-1172 PE anti-mouse CD117 (c-Kit, cKit) (clone ACK2)

Cat. 15-1172 PE-Cy5 anti-mouse CD117 (c-Kit, cKit) (clone ACK2)

Cat. 16-1172 Functional Grade Purified anti-mouse CD117 (c-Kit, cKit) - neutralizing (clone ACK2)

- Cat. 17-1172 APC anti-mouse CD117 (c-Kit, cKit) (clone ACK2)
Cat. 25-1172 Phycoerythrin-Cy7 (PE-Cy7) anti-mouse CD117 (c-Kit, cKit) - neutralizing (clone ACK2)
Cat. 14-4031 Purified Rat IgG2b Isotype Control (clone eB149/10H5)
Cat. 11-4317 Streptavidin-FITC (Fluorescein isothiocyanate)
Cat. 12-4317 Streptavidin-PE (Phycoerythrin)
Cat. 17-4317 Streptavidin Allophycocyanin (SA-APC)
Cat. 11-4811 FITC Anti-Rat IgG
Cat. 13-4813 Biotin Anti-Rat IgG (clone Polyclonal)

References

- Rico-Vargas, S., et al. 1994. c-kit expression by B cell precursors in mouse bone marrow. *J. Immunol.* 152: 2845.
Ito M, Kawa Y, et al. 1999. Removal of stem cell factor or addition of monoclonal anti-c-KIT antibody induces apoptosis in murine melanocyte precursors. *J Invest Dermatol.* 112: 796-801.
Vincent S, Segretain D, et al. 1998. Stage-specific expression of the Kit receptor and its ligand (KL) during male gametogenesis in the mouse: a Kit-KL interaction critical for meiosis. *Development.* 125: 4585-93.
Sato D, Lai ZF, et al. 1996. Impairment of Kit-dependent development of interstitial cells alters contractile responses of murine intestinal tract. *Am J Physiol.* 271: G762-71.
Yoshida H, Kunisada T, et al. 1996. Distinct stages of melanocyte differentiation revealed by analysis of nonuniform pigmentation patterns. *Development.* 122: 1207-14.
Yoshinaga K, Nishikawa S, et al. 1991. Role of c-kit in mouse spermatogenesis: identification of spermatogonia as a specific site of c-kit expression and function. *Development.* 113:689-99.
Torihashi S, Ward SM, et al. 1995. c-kit-dependent development of interstitial cells and electrical activity in the murine gastrointestinal tract. *Cell Tissue Res.* 280:97-111.
Feng H, Sandlow JI, Sandra A. 1997. Expression and function of the c-kit proto-oncogene protein in mouse sperm. *Biol Reprod.* 57:194-203.
Feng H, Sandlow JI, Sandra A. 1998. The c-kit receptor and its possible signaling transduction pathway in mouse spermatozoa. *Mol Reprod Dev.* 49:317-26.