TECHNICAL DATA SHEET

In Vivo Ready™ Anti-Mouse CD117 (c-Kit) (ACK2)

Catalog Number: 40-1172

PRODUCT INFORMATION

Contents: In Vivo Ready™ Anti-Mouse CD117 (c-Kit) (ACK2)

Isotype: Rat IgG2b, kappa

Concentration: 2 mg/mL

Clone: ACK2

Reactivity: Mouse

Formulation: 10 mM NaH2PO4, 150 mM NaCl, pH7.2

Endotoxin Level: Less than or equal to 0.01 EU/ug, as determined by the LaL assay

DESCRIPTION

The ACK2 antibody is specific for CD117, also called c-Kit, a 145 kDa cytokine receptor important in the development of hematopoietic stem cells, in oogenesis, and for functional activity of immune cells such as NK and mast cells. c-Kit binds to a ligand known as stem cell factor (SCF), or alternatively as mast cell growth factor. Ligand binding promotes the activation (dimerization) and subsequent tyrosine kinase activity of the c-Kit receptor and triggers key survival, expansion and maturation signals during hematopoietic progenitor cell development. Conversely, shedding of extracellular domain of c-Kit receptor is reported to induce inactivation or apoptosis within these cells. The survival signaling activity of c-Kit confers a proto-oncogenic attribute to the receptor, as overexpression or mutations in this protein are associated with tumor development.The ACK2 antibody is widely utilized as a marker to identify hematopoietic progenitors, and to neutralize receptor-ligand binding in vitro and in vivo. In addition, the antibody is reported to be cross-reactive with rat c-Kit and is extensively published for use in this species.

PREPARATION & STORAGE

This monoclonal antibody preparation was purified from tissue culture supernatant via affinity chromatography. For In Vivo Ready™ (IVR) products, each preparation is also evaluated for endotoxin levels using the LAL assay. It is recommended to store the product undiluted at 4°C. Do not freeze.

APPLICATION NOTES

This purified format is guaranteed to be >90% pure as determined by SDS-PAGE analysis. Citations are provided as a convenience to you - please consult Materials and Methods sections for additional details about the use of any product in these publications.

REFERENCES

Tang X, Tian L, Esteso G, Choi S-C, Barrow AD, Colonna M, Borrego F, and Coligan JE. 2012. J. Immunol. 188: 548-558. (flow cytometry)Launay J-M, Herve P, Callebert J, Mallat Z, Collet C, Doly S, Belmer A, Diaz SL, Cote F, Humbert M, and Maroteaux L. 2012. Blood. 119: 1772-1780. (immunohistochemistry - formaldehyde fixed tissue)Mark-Kappeler CJ, Sen N, Lukefahr A, McKee L, Sipes IG, Konhilas J, and Hoyer PB. 2011. Biol. Reprod. 85: 755-762. (in vitro blocking, western blot – Fischer 344 Rat)Kim M-H, Granick JL, Wkok C, Walker NJ, Borjesson DL, Curry F-RE, Miller LS, and Simon SI. 2011. Blood. 117:3343-3352. (in vivo depletion)Fiorina P, Jurewicz M, Vergani A, Petrelli A, Carvello M, D'Addio F et al. 2011. J. Immunol. 186:121-131. (in vivo blocking)Stanich JE, Gibbons SJ, Eisenman ST, Bardsley MR, Rock JR, Harfe BD, Ordog T, and Farrugia G. 2011. 301: G1044-G1051. (immunocytochemistry - acetone fixed cells)Carlsson IB, Laitinen MPE, Scott JE, Louhio H, Velentzis L, Tuuri T, Aaltonen J, Ritvos O, Winston RML, and Hovatta O. 2006. Reproduction. 131: 641-649. (immunohistochemistry – paraffin embedded tissue, in vivo blocking)

NOTE: Please choose the appropriate format for each application. Citations are provided as a convenience to you; please consult Materials and Methods sections for additional details about the use of any product in these publications.

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