Canine CCL5/RANTES Antibody

Monoclonal Mouse IgG_{2B} Clone # 676117

Catalog Number: MAB6045

DESCRIPTION

Species Reactivity	Canine
Specificity	Detects canine CCL5/RANTES in direct ELISAs. In Western blots, no cross-reactivity with recombinant cotton rat CCL5, recombinant feline CCL5, recombinant human (rh) CCL5, 17, 18, recombinant mouse (rm) CCL5, 7, or 18 is observed. In direct ELISAs, approximately 25% cross-reactivity with recombinant human CCL5 and no cross-reactivity with recombinant CCL5 from cotton rat, cat, or mouse is observed. No cross-reactivity with rhCCL1, 4, 11, 14, 16, 21, 23, 24, 26, 27, rmCCL6, 11, 21, 24, 26, or 27 is observed.
Source	Monoclonal Mouse IgG_{2B} Clone # 676117
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant canine CCL5/RANTES Ser24-Ser91 Accession # Q8HYS0
Endotoxin Level	<0.01 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

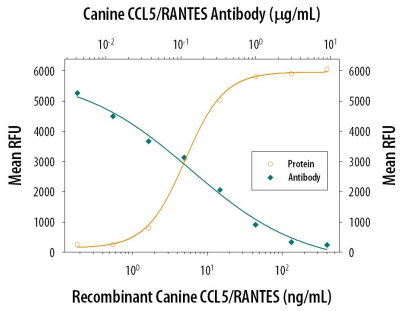
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

Neutralization	Measured by its ability to neutralize CCL5/RANTES-induced chemotaxis in the BaF3 mouse pro−B cell line transfected with human CCR5. The Neutralization Dose (ND_{50}) is typically 0.075-0.45 µg/mL in the presence of 10 ng/mL Recombinant Canine CCL5/RANTES.

DATA

Neutralization



Chemotaxis Induced by CCL5/RANTES and Neutralization by Canine CCL5/RANTES Antibody. Recombinant Canine CCL5/RANTES (Catalog # 6045-CR) chemoattracts the BaF3 mouse pro-B cell line transfected with human CCR5 in a dose-dependent manner (orange line). The amount of cells that migrated through to the lower chemotaxis chamber was measured by Resazurin (Catalog # AR002). Chemotaxis elicited by Recombinant Canine CCL5/RANTES (10 ng/mL) is neutralized (green line) by increasing concentrations of Mouse Anti-Canine CCL5/RANTES Monoclonal Antibody (Catalog # MAB6045). The ND_{50} is typically 0.075-0.45 µg/mL.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

CCL5, also known as RANTES (Regulated upon Activation, Normal T cell Expressed and presumably Secreted), is an 8 kDa β-chemokine that plays a primary role in the inflammatory immune response by means of its ability to attract and activate leukocytes (1-3). Human and mouse RANTES exhibit cross-species activity on human and mouse cells (4). Mature canine CCL5 shares 74%-84% amino acid sequence identity with cotton rat, feline, human, mouse, and rat CCL5. CCL5 is secreted by many cell types at inflammatory sites, and it exerts a wide range of activities through the receptors CCR1, CCR3, CCR4, and CCR5 (5, 6). Inflammatory responses can be impaired by the sequestration of CCL5 by the cytomegalovirus protein US28 (7). In humans, CCR5 binding to CCL5 inhibits the infectivity of R5 (M-tropic) but not X4 (T-tropic) strains of HIV-1 (8). The two N-terminal residues of CCL5 can be removed by CD26/DPPIV, generating a protein that functions as a chemotaxis inhibitor and more effectively blocks M-tropic HIV-1 infection of monocytes (9). Oligomerization of CCL5 on glycosaminoglycans is required for CCR1-mediated leukocyte adhesion and activation as well as CCL5's interaction with the chemokine CXCL4/PF4 (10-12). The deposition of CCL5 on activated vascular endothelial cells is crucial for monocyte adhesion to damaged vasculature, but CCL5 oligomerization is not required for the extravasation of adherent leukocytes (13-15). CCL5 is upregulated in breast cancer and promotes tumor progression through the attraction of proinflammatory macrophages in addition to its actions on tumor cells, stromal cells, and the vasculature (16).

References:

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