Canine CXCL8/IL-8 Antibody

Monoclonal Mouse IgG_1 Clone # 258911

Catalog Number: MAB1608

DESCRIPTION

Species Reactivity	Canine
Specificity	Detects canine CXCL8/IL-8 in direct ELISAs and Western blots. Does not cross-react with recombinant human CXCL1, 2, 3, 5, 6, 7, 8, 9, 10, 11, CXCL12/SDF-1α, 12/SDF-1β, 13, 16, recombinant mouse CXCL1, 6, 9, 10, CXCL12/SDF-1α, 13, recombinant rat CXCL1, CXCL3/CINC-2α, rrCXCL3/CINC-2β, or recombinant porcine CXCL8.
Source	Monoclonal Mouse IgG_1 Clone # 258911
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant canine CXCL8/IL-8 Ala23-Pro101 Accession # P41324
Endotoxin Level	<0.10 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.

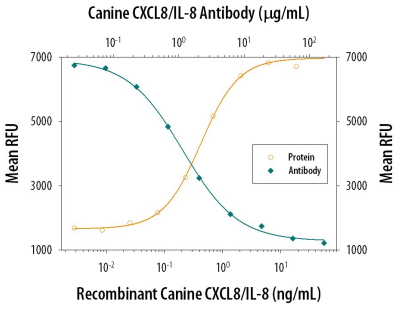
APPLICATIONS

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.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	Recombinant Canine CXCL8/IL-8 (Catalog # 1608-CL)
Immunocytochemistry	8-25 µg/mL	Immersion fixed canine peripheral blood mononuclear cells
Neutralization	Measured by its ability to neutralize CXCL8/IL-8-induced chemotaxis in the BaF3 mouse pro-B cell line transfected with human CXCR2. The Neutralization Dose (ND_{50}) is typically 0.3-1.2 µg/mL in the presence of 10 ng/mL Recombinant Canine CXCL8/IL-8.	

DATA

Neutralization



Chemotaxis Induced by CXCL8/IL-8 and Neutralization by Canine CXCL8/IL-8 Antibody. Recombinant Canine CXCL8/IL-8 (Catalog # 1608-CL) chemoattracts the BaF3 mouse pro-B cell line transfected with human CXCR2 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 CXCL8/IL-8 (10 ng/mL) is neutralized (green line) by increasing concentrations of Canine CXCL8/IL-8 Monoclonal Antibody (Catalog # MAB1608). The ND_{50} is typically 0.3-1.2 µg/mL.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
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

Interleukin 8 (IL-8), also named monocyte-derived neutrophil chemotactic factor (MDNCF), neutrophil-activating protein 1 (NAP-1), neutrophil-activating factor (NAF) and granulocyte chemotactic peptide (GCP), belongs to the Glu-Leu-Arg motif containing (ELR^+) CXC chemokine family and has been designated CXCL8. IL-8 is a potent neutrophil chemoattractant that recruits neutrophils to sites of inflammation. IL-8 also activates neutrophil functions and through a poorly understood mechanism, promotes angiogenesis. The biological activites of IL-8 is mediated by two types of G protein-coupled chemokine receptors, CXCR1 and CXCR2. In normal tissues, IL-8 expression and secretion is barely detectable. Upon stimulation by a wide range of pro-inflammatory signals including exposure to IL-1, TNF, bacterial or viral products, IL-8 production is rapidly induced in many different cell types. Secreted IL-8 is not glycosylated but has N-terminal sequence heterogenecity due to proteolytic processing. In human, two major forms, the 72 amino acid (aa) monocyte-derived IL-8 and the 77 aa endothelial IL-8 have been identified. Whereas the 72 aa isoform is a more potent chemoattractant, only the 77 aa isoform can induce apoptosis in leukemic cells. The N-terminal pentapeptide in the 77 aa isoform has been identified as the active site for the IL-8 apoptotic activity. Canine IL-8 encodes a 101 aa precursor protein with a putative 22 aa signal peptide. It shares 77% and 87% aa sequence identity with human and porcine IL-8, respectively. Similar to human IL-8, recombinant canine IL-8 also undergoes N-terminal processing. Two major peptides (the 79 aa and 74 aa variants that differ by an analogous N-terminal pentapeptide) are present in the recombinant canine IL-8 preparations.

References:

1. Van Damme, J. *et al.* (1998) in *The Cytokine Handbook,* A.W. Thomson, ed., Academic Press, New York., p. 271.
2. Terui, Y. *et al.* (1998) Blood **92**:2672.
3. Terui, Y. *et al.* (1999) Cancer Research **59**:5651.