Rat CXCL1/GROα/KC/CINC-1 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF-515-NA

DESCRIPTION

Species Reactivity	Rat
Specificity	Detects rat CXCL1/GROα/KC/CINC-1 in direct ELISAs and Western blots. In direct ELISAs, less than 50% cross-reactivity with recombinant mouse (rm) KC is observed and less than 10% cross-reactivity with recombinant human (rh) GROα, rhGROβ, rhGROγ, rmMIP-2, recombinant rat (rr) CINC-2α, rrCINC-2β, and rrCINC-3.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant rat CXCL1/GROα/KC/CINC-1 (R&D Systems, Catalog # 515-CN) Ala25-Lys96 Accession # P14095
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.

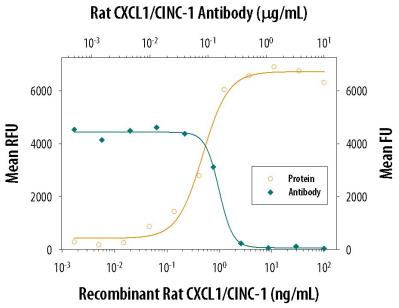
APPLICATIONS

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	0.1 µg/mL	Recombinant Rat CXCL1/GROα/KC/CINC-1 (Catalog # 515-CN)
Immunohistochemistry	5-15 µg/mL	See Below
Neutralization	Measured by its ability to neutralize CXCL1/GROα/KC/CINC-1-induced chemotaxis in the BaF3 mouse pro-B cell line transfected with human CXCR2. The Neutralization Dose (ND_{50}) is typically 0.15-0.75 µg/mL in the presence of 4 ng/mL Recombinant Rat CXCL1/GROα/KC/CINC-1.	

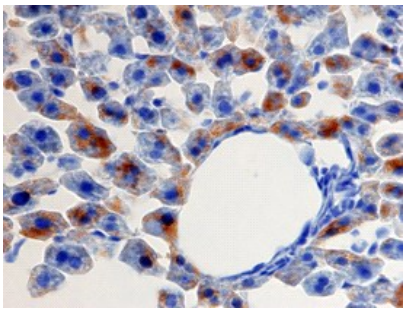
DATA

Neutralization



Chemotaxis Induced by CXCL1/CINC-1 and Neutralization by Rat CXCL1/CINC-1 Antibody. Recombinant Rat CXCL1/CINC-1 (Catalog # 515-CN) 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 Rat CXCL1/CINC-1 (4 ng/mL) is neutralized (green line) by increasing concentrations of Rat CXCL1/CINC-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-515-NA). The ND_{50} is typically 0.15-0.75 µg/mL.

Immunohistochemistry



CXCL1/GROα/KC/CINC-1 in Rat Liver. CXCL1/GROα/KC/CINC-1 was detected in perfusion fixed paraffin-embedded sections of rat liver using 15 µg/mL Rat CXCL1/GROα/KC/CINC-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-515-NA) overnight at 4 °C. Tissue was stained with the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

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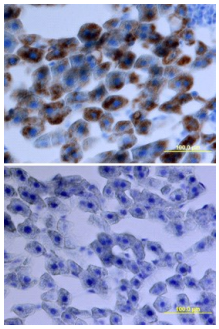
Immunohistochemistry



CXCL1/GROα/KC/CINC-1 in Rat Liver.
CXCL1/GROα/KC/CINC-1 was detected in perfusion fixed frozen sections of rat liver using Rat CXCL1/GROα/KC/CINC-1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-515-NA) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Lower panel shows a lack of labeling if primary antibodies are omitted and tissue is stained only with secondary antibody followed by incubation with detection reagents. View our protocol for Chromogenic IHC Staining of Frozen Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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.

BACKGROUND

Cytokine-induced neutrophil chemoattractant 1 (CINC-1) was originally purified from media conditioned by IL-1β stimulated rat kidney epithelioid cells (NRK-52E). On the basis of its protein and DNA sequences, CINC-1 is a member of the alpha (CXC) subfamily of chemokines. Three additional rat CXC chemokines (CINC-2α, CINC-2β, CINC-3/MIP-2), sharing approximately 63-67% amino acid sequence identity with CINC-1, have been identified. The protein sequence of rat CINC-1 is also 68%, 71%, and 69% identical to that of human GRO-α, GRO-β, and GRO-γ, respectively. Based on their sequence homology, it has been suggested that CINCs are the rat counterpart of human GROs.

Rat CINC-1 cDNA encodes a 96 amino acid residue precursor protein from which the amino-terminal 24 amino acid residues are cleaved to generate the mature CINC-1. Similar to other alpha chemokines, rat CINCs are potent neutrophil attractants and activators and have been shown to play an important role in the infiltration of neutrophils into inflammatory sites in rats.

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