Human CXCL6/GCP-2 Antibody

Antigen Affinity-purified Polyclonal Goat IgG

Catalog Number: AF333

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CXCL6/GCP-2 in direct ELISAs and Western blots. In direct ELISAs, less than 5% cross-reactivity with recombinant mouse (rm) MIP-2, rmKC, recombinant rat (rr) CINC-2α, rmCRG-2, recombinant human (rh) NAP-2, rrCINC-2β and rhMCP-3 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human CXCL6/GCP-2 Val40-Asn114 Accession # P80162
Endotoxin Level	<0.20 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 either lyophilized or as a 0.2 µm filtered solution in PBS.

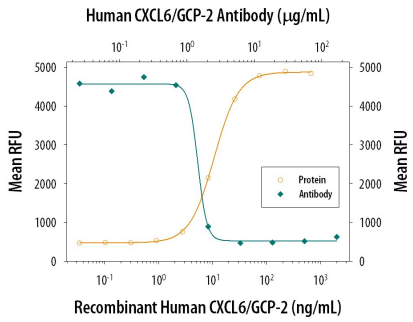
APPLICATIONS

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 Human CXCL6/GCP-2 (Catalog # 333-GC)
Neutralization	Measured by its ability to neutralize CXCL6/GCP-2-induced chemotaxis in the BaF3 mouse pro-B cell line transfected with human CXCR2. The Neutralization Dose (ND_{50}) is typically 0.8-4.0 µg/mL in the presence of 80 ng/mL Recombinant Human CXCL6/GCP-2.	

DATA

Neutralization



Chemotaxis Induced by CXCL6/GCP-2 and Neutralization by Human CXCL6/GCP-2 Antibody. Recombinant Human CXCL6/GCP-2 (Catalog # 333-GC) 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 Human CXCL6/GCP-2 (80 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human CXCL6/GCP-2 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF333). The ND_{50} is typically 0.8-4.0 µg/mL.

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.

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BACKGROUND

GCP-2 (granulocyte chemotactic protein-2) also known as CXCL6, is a CXC chemokine initially isolated as a neutrophil chemoattractant from the MG-63 osteosarcoma cell line. Among human CXC chemokines, GCP-2 is most closely related to ENA-78 (78% amino acid (aa) sequence identity in the mature peptide region and 86% identity in the signal sequence). The structure and sequence of the genes for human GCP-2 and ENA-78 also exhibit close similarity suggesting the two genes may have originated from a gene duplication. LIX (LPS-induced CXC chemokine) was initially cloned as a gene induced by LPS in mouse fibroblasts. The predicted LIX protein sequence is identical to a previously purified mouse protein designated mouse GCP-2 based on its amino sequence similarity (60% sequence identity) to human GCP-2. Mouse GCP-2/LIX is also 54% identical with human ENA-78 at the amino acid sequence level.

Human GCP-2 cDNA encodes a propeptide of 114 amino acid residues with a predicted 37 aa residue signal peptide and 77 aa residue mature protein. Several forms of natural GCP-2 have been isolated from MG-63 conditioned media, indicating that GCP-2 undergoes limited processing at both the N- and C-termini. Human GCP-2 is a primary response gene whose induction by cytokines is attenuated by dexamethasone.

Human GCP-2 and mouse GCP-2/LIX have been shown to chemoattract and activate neutrophils, but not eosinophils and monocytes. It is likely that GCP-2 activities are mediated via the human or mouse CXCR2.

References:

1. Proost, P. *et al.* (1993) J. Immunol. **150**:1000.
2. Smith, J.B. and H.R. Herschman (1995) J. Biol. Chem. **270**:16756.
3. Rovai, L.E. *et al.* (1997) J. Immunol. **158**:5257.
4. Wuyts, A. *et al.* (1997) J. Immunol. **157**:1736.

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