

# GRO $\alpha$ (C-15): sc-1374

## BACKGROUND

Chemokines are members of a superfamily of small, inducible, secreted, pro-inflammatory cytokines. Members of the chemokine family exhibit 20% to 50% homology in their predicted amino acid sequences and are divided into four subfamilies. In the C-X-C or  $\alpha$  subfamily, the first two of four cysteine motifs are separated by another amino acid residue. The C-X-C chemokine subfamily includes IL-8, GRO $\alpha$ / $\beta$ / $\gamma$  (and the murine homologs KC, MIP-2 $\alpha$  and MIP-2 $\beta$ ), platelet basic protein, ENA-78, GCP-2, PF4, IP-10 (and its murine homolog, CRG) and MIG. GRO $\alpha$ ,  $\beta$  and  $\gamma$  (growth-related oncogene  $\alpha$ / $\beta$ / $\gamma$ ) are C-X-C chemokines important for the regulation of cell motility and growth. They function as neutrophil chemoattractants and mediators of angiogenesis. The GRO proteins may play a role in melanocyte progression to malignant melanoma.

## REFERENCES

1. Oppenheim, J.J., et al. 1991. Properties of the novel proinflammatory supergene "intercrine" cytokine family. *Annu. Rev. Immunol.* 9: 617-648.
2. Schall, T.J. 1991. Biology of the RANTES/SIS cytokine family. *Cytokine* 3: 165-183.
3. Miller, M.D. and Krangel, M.S. 1992. Biology and biochemistry of the chemokines: a family of chemotactic and inflammatory cytokines. *Crit. Rev. Immunol.* 12: 17-46.
4. Taub, D.D. and Oppenheim, J.J. 1993. Review of the chemokine meeting of the third international symposium of chemotactic cytokines. *Cytokine* 5: 175-179.

## CHROMOSOMAL LOCATION

Genetic locus: CXCL1 (human) mapping to 4q13.3.

## SOURCE

GRO $\alpha$  (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of GRO $\alpha$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1374 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

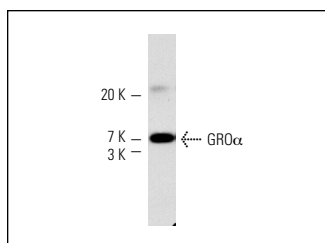
GRO $\alpha$  (C-15) is recommended for detection of GRO $\alpha$  of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000). Suitable for use as control antibody for GRO $\alpha$  siRNA (h): sc-43816, GRO $\alpha$  shRNA Plasmid (h): sc-43816-SH and GRO $\alpha$  shRNA (h) Lentiviral Particles: sc-43816-V.

Molecular Weight of GRO $\alpha$ : 8 kDa.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## DATA



GRO $\alpha$  (C-15): sc-1374. Western blot analysis of human recombinant GRO $\alpha$  expression at 50 ng.

## SELECT PRODUCT CITATIONS

1. Klein, A.M., et al. 2000. Growth-related oncogene- $\alpha$  expression in human nasal polyps. *Otolaryngol. Head Neck Surg.* 123: 85-90.
2. De Paepe, B., et al. 2005.  $\alpha$ -chemokine receptors CXCR1-3 and their ligands in idiopathic inflammatory myopathies. *Acta Neuropathol.* 109: 576-582.
3. Sachse, F., et al. 2005. Neutrophil chemokines in epithelial inflammatory processes of human tonsils. *Clin. Exp. Immunol.* 140: 293-300.
4. Sachse, F., et al. 2006. Induction of CXC chemokines in A549 airway epithelial cells by Trypsin and staphylococcal proteases—a possible route for neutrophilic inflammation in chronic rhinosinusitis. *Clin. Exp. Immunol.* 144: 534-542.
5. Rubie, C., et al. 2008. ELR<sup>+</sup> CXC chemokine expression in benign and malignant colorectal conditions. *BMC Cancer* 8: 178.
6. Wallace, A.E., et al. 2009. Prostaglandin F<sub>2</sub> $\alpha$ -F-prostanoid receptor signaling promotes neutrophil chemotaxis via chemokine (C-X-C motif) ligand 1 in endometrial adenocarcinoma. *Cancer Res.* 69: 5726-5733.
7. De Paepe, B., et al. 2012. Upregulation of chemokines and their receptors in duchenne muscular dystrophy: potential for attenuation of myofiber necrosis. *Muscle Nerve* 45: 914-916.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.



Try **GRO $\alpha$  (G-7): sc-514065** or **GRO $\alpha$  (5G11): sc-130316**, our highly recommended monoclonal alternatives to GRO $\alpha$  (C-15).