

#### DESCRIPTION

<b>Species Reactivity</b>	Cotton Rat
<b>Specificity</b>	Detects cotton rat CCL3/MIP-1 $\alpha$ in Western blots. In this format, approximately 30% cross-reactivity with recombinant mouse CCL3/MIP-1 $\alpha$ is observed and less than 1% cross-reactivity with recombinant human CCL3/MIP-1 $\alpha$ and recombinant rat CCL3/MIP-1 $\alpha$ is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant cotton rat CCL3/MIP-1 $\alpha$ (R&D Systems, Catalog # 1061-RM) Ala24-Ala92 Accession # AAL26704
<b>Formulation</b>	Lyophilized from a 0.2 $\mu$ m filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

#### 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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	0.1 $\mu$ g/mL	Recombinant Cotton Rat CCL3/MIP-1 $\alpha$ (Catalog # 1061-RM)

#### PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

#### BACKGROUND

MIP-1 $\alpha$  is a  $\beta$  family (CC) chemokine and has been designated CCL3. MIP-1 $\alpha$  and MIP-1 $\beta$ , two closely related but distinct proteins, were originally purified from medium conditioned by a LPS-stimulated murine macrophage cell line. Cotton rat MIP-1 $\alpha$  cDNA encodes a 92 amino acid (aa) residue precursor protein with a 23 aa putative signal peptide. Mature cotton rat MIP-1 $\alpha$  shares approximately 70% amino acid identity with human MIP-1 $\alpha$ . MIP-1 $\alpha$  is expressed in a wide variety of cells, including lymphocytes, fibroblasts, and epithelial cells, as well as monocytes/macrophages.

MIP-1 $\alpha$  has been shown to play an important role in the recruitment of mononuclear cells. Additionally, MIP-1 $\alpha$  has been reported to have chemoattractant and adhesive effects on lymphocytes, preferentially promoting the chemotaxis of Th1 cells. MIP-1 $\alpha$  has also been shown to attract B cells, eosinophils, and dendritic cells. In addition, MIP-1 $\alpha$  augments cytolytic activity of NK cells (1). MIP-1 $\alpha$  has been identified as a stem cell inhibitory factor that can inhibit the proliferation of hematopoietic stem cells *in vitro* as well as *in vivo*. It has been demonstrated that MIP-1 $\alpha$  can bind the chemokine receptors CCR1 and CCR5 (2).

#### References:

1. Robertson, M. (2002) *J. Leukoc. Biol.* **71**:173.
2. Zlotnik, A. *et al.* (2000) *Immunity* **12**:121.