

DESCRIPTION

Species Reactivity	Rat
Specificity	Detects rat CCL3/MIP-1α in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant rat CCL4 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant rat CCL3/MIP-1α Ala24-Ala92 Accession # P50229
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

CCL3, also known as macrophage inflammatory protein 1 alpha (MIP-1α) and LD78, is a member of the β or CC subfamily of chemokines and is closely related to CCL4/MIP-1β. Chemokines comprise a large family of small secreted proteins that are involved in immune and inflammatory responses. CCL3 expression can be induced in a variety of hematopoietic cells, fibroblasts, smooth muscle cells, and epithelial cells (1). Mature rat CCL3 shares 74%, 91%, and 88% amino acid sequence identity with human, mouse, and cotton rat CCL3, respectively (2). CCL3 is an approximately 8 kDa chemokine that forms complexes with sulfated proteoglycans (3, 4). In a reversible process, CCL3 associates into noncovalently-linked dimers which then form tetramers and high molecular weight polymers (5, 6). These complexes of CCL3 are protected from proteolytic digestion by insulin degrading enzyme (IDE) which can cleave the monomeric chemokine (6). CCL3 exerts its biological functions through interactions with CCR1, CCR3, and CCR5 (1). It is cleared from the extracellular space by internalization via the decoy chemokine receptor D6 (7). CCL3 promotes the chemoattraction, adhesion to activated vascular endothelium, and cellular activation of many hematopoietic cell types including activated T cells, NK cells, neutrophils, monocytes, immature dendritic cells, and eosinophils (1, 8-10). CCL3 is also known as stem cell inhibitor (SCI) and can inhibit the proliferation of hematopoietic progenitor cells (3). CCL3 bioactivity contributes to tumor metastasis and the inflammatory components of viral infection, rheumatoid arthritis, and hepatitis (11-14), although it also can suppress the replication of HIV (15). CCL3 additionally promotes hyperalgesia by sensitizing sensory neurons to TRPV1-mediated noxious stimulation (16).

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