

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CCL2/JE/MCP-1 in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human CCL2/JE/MCP-1 Gln24-Thr99 Accession # P13500
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 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.

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

CCL2, also known as monocyte chemoattractant and activating factor (MCAF), was initially purified independently by two groups based on its ability to chemoattract monocytes. The human CCL2 cDNA encodes a 99 amino acid residue precursor protein with a 23 residue hydrophobic signal peptide that is cleaved to generate the 76 residue mature protein. Natural CCL2 is heterogeneous in size due to the addition of O-linked carbohydrates and sialic acid residues. In addition to fibroblasts; tumor cells, smooth muscle cells, endothelial cells, and mononuclear phagocytes can also produce CCL2 either constitutively or upon stimulation by various stimuli. CCL2 is a member of the β (C-C) subfamily of chemokines. The existence of MCP-2 and MCP-3 with 62% and 73% amino acid identity respectively, to CCL2 have been reported. Consistent with it being a member of the chemokine β family, CCL2 has been shown to chemoattract monocytes. In addition, it will also activate monocytes to be cytostatic for some human tumor cell lines; to increase cytosolic free calcium; to generate and release monocyte superoxide anions and to release monocyte lysosomal enzymes *in vitro*. CCL2 was reported to be capable of regulating adhesion molecule expression and cytokine production in human monocytes as well as chemoattracting, activating, and inducing histamine release from basophils. The biological roles played by CCL2 in a number of inflammatory and non-inflammatory disease states characterized by the accumulation of leukocytes at the site of the lesion, including atherosclerosis, delayed hypersensitivity reactions, etc., are being determined. CCL2 can bind to the C-C chemokine receptor-1 that also binds MIP-1 α , RANTES and MIP-1 β . A specific receptor for CCL2 has also been cloned from THP-1 and MonoMac 6 cells.

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