SANTA CRUZ BIOTECHNOLOGY, INC.

# MIP-1α (C-5): sc-365691

## BACKGROUND

Chemokines are members of a superfamily of small inducible, secreted, pro-inflammatory cytokines. Members of the chemokine family exhibit 20-50% homology in their predicted amino acid sequences and are divided into four subfamilies. In C-C (or β) subfamily, the first two cysteines are adjacent. C-C chemokines are chemoattractants and activators for monocytes and T cells. C-C subfamily members include macrophage inflammatory protein (MIP)-1α, MIP-1β, MIP-2, MIP-3α, MIP-3β, MIP-4, HCC-1, MIP-5 (or HCC-2), RANTES, MCP-1/2/3 (and the murine homologs JE and MARC), I-309, murine C10 and TCA3. Research has shown that MIP-1β is more selective than MIP-1α, primarily attracting $CD4^+$ T lymphocytes, with a preference for T cells of the naive phenotype. MIP-1α is a more potent lymphocyte chemoattractant than MIP-1β and exhibits a broader range of chemoattractant specificities. It has been suggested that $CD8^+$ T lymphocytes are involved in the control of HIV infection *in vivo* by the release of HIV-suppressive factors (HIV-SF). MIP-1α has been identified as one of the major HIV-SFs produced by $CD8^+$ T cells, along with MIP-1β and RANTES. Recombinant human MIP-1α acts as an inhibitor of different strains of HIV-1, HIV-2 and SIV infection in a dose-dependent manner.

## CHROMOSOMAL LOCATION

Genetic locus: Ccl3 (mouse) mapping to 11 C.

## SOURCE

MIP-1α (C-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 67-92 at the C-terminus of MIP-1α of mouse origin.

## PRODUCT

Each vial contains 200 µg $IgG_1$ lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MIP-1α (C-5) is available conjugated to agarose (sc-365691 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-365691 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365691 PE), fluorescein (sc-365691 FITC), Alexa Fluor® 488 (sc-365691 AF488), Alexa Fluor® 546 (sc-365691 AF546), Alexa Fluor® 594 (sc-365691 AF594) or Alexa Fluor® 647 (sc-365691 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365691 AF680) or Alexa Fluor® 790 (sc-365691 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365691 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).



## STORAGE

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

## PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

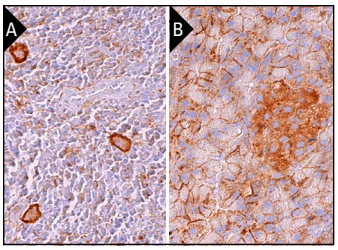
## APPLICATIONS

MIP-1α (C-5) is recommended for detection of MIP-1α of mouse and rat origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 MIP-1α siRNA (m): sc-44722, MIP-1α shRNA Plasmid (m): sc-44722-SH and MIP-1α shRNA (m) Lentiviral Particles: sc-44722-V.

Molecular Weight of MIP-1α: 10 kDa.

## DATA




MIP-1α (C-5): sc-365691. Immunoperoxidase staining of formalin fixed, paraffin-embedded rat bone marrow tissue showing cytoplasmic and membrane staining of subset of hematopoietic cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded rat pancreas tissue showing cytoplasmic and membrane staining of exocrine glandular cells and cytoplasmic staining of Islets of Langerhans (**B**).

## SELECT PRODUCT CITATIONS

1. Chen, X.J., et al. 2017. JNK signaling is required for the MIP-1α-associated regulation of Kupffer cells in the heat stroke response. Mol. Med. Rep. 16: 2389-2396.
2. Zha, D., et al. 2019. Telmisartan attenuates diabetic nephropathy progression by inhibiting the dimerization of angiotensin type-1 receptor and adiponectin receptor-1. Life Sci. 221: 109-120.
3. Mou, W.L., et al. 2022. LPS-TLR4/MD-2-TNF-α signaling mediates alcohol-induced liver fibrosis in rats. J. Toxicol. Pathol. 35: 193-203.
4. Ma, S., et al. 2022. Heterochronic parabiosis induces stem cell revitalization and systemic rejuvenation across aged tissues. Cell Stem Cell 29: 990-1005.e10.
5. Liu, S., et al. 2022. Investigating the multi-target therapeutic mechanism of Guihuang formula on chronic prostatitis. J. Ethnopharmacol. 294: 115386.
6. Drummond, I.S.A., et al. 2024. Evaluation of the therapeutic potential of amantadine in a vincristine-induced peripheral neuropathy model in rats. Animals 14: 1941.

## RESEARCH USE

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