

MIP-1 α (E-2): sc-393899

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 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)-1 α , MIP-1 β , MIP-2, MIP-3 α , MIP-3 β , 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-1 β is more selective than MIP-1 α , primarily attracting CD4⁺ T lymphocytes, with a preference for T cells of the naive phenotype. MIP-1 α is a more potent lymphocyte chemoattractant than MIP-1 β 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-1 α has been identified as one of the major HIV-SFs produced by CD8⁺ T cells, along with MIP-1 β and RANTES. Recombinant human MIP-1 α acts as an inhibitor of different strains of HIV-1, HIV-2 and SIV infection in a dose-dependent manner.

REFERENCES

- Zipfel, P.F., et al. 1989. Mitogenic activation of human T cells induces two closely related genes which share structural similarities with a new family of secreted factors. *J. Immunol.* 142: 1582-1590.
- Widmer, U., et al. 1993. Genomic cloning and promoter analysis of macrophage inflammatory protein (MIP)-2, MIP-1 α and MIP-1 β , members of the chemokine superfamily of proinflammatory cytokines. *J. Immunol.* 150: 4996-5012.
- Schall, T.J., et al. 1993. Human macrophage inflammatory protein α (MIP-1 α) and MIP-1 β chemokines attract distinct populations of lymphocytes. *J. Exp. Med.* 177: 1821-1826.
- Ugucione, M., et al. 1995. Actions of the chemotactic cytokines MCP-1, MCP-2, MCP-3, RANTES, MIP-1 α and MIP-1 β on human monocytes. *Eur. J. Immunol.* 25: 64-68.
- Cocchi, F., et al. 1995. Identification of RANTES, MIP-1 α and MIP-1 β as the major HIV-suppressive factors produced by CD8⁺ T cells. *Science* 270: 1811-1815.

CHROMOSOMAL LOCATION

Genetic locus: CCL3 (human) mapping to 17q12.

SOURCE

MIP-1 α (E-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 23-54 at the N-terminus of MIP-1 α of human origin.

STORAGE

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

RESEARCH USE

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

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-393899 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

MIP-1 α (E-2) is recommended for detection of MIP-1 α of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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 MIP-1 α siRNA (h): sc-43933, MIP-1 α shRNA Plasmid (h): sc-43933-SH and MIP-1 α shRNA (h) Lentiviral Particles: sc-43933-V.

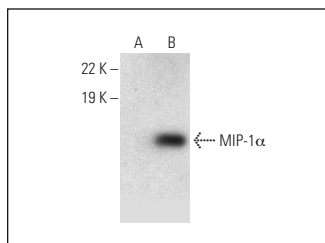
Molecular Weight of MIP-1 α : 10 kDa.

Positive Controls: MIP-1 α (h): 293T Lysate: sc-114143.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



MIP-1 α (E-2): sc-393899. Western blot analysis of MIP-1 α expression in non-transfected: sc-117752 (A) and human MIP-1 α transfected: sc-114143 (B) 293T whole cell lysates.

PROTOCOLS

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