

MIP-1 β (3H3): sc-130330

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.

CHROMOSOMAL LOCATION

Genetic locus: CCL4 (human) mapping to 17q12.

SOURCE

MIP-1 β (3H3) is a mouse monoclonal antibody raised against recombinant MIP-1 β of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

MIP-1 β (3H3) is available conjugated to agarose (sc-130330 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-130330 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-130330 PE), fluorescein (sc-130330 FITC), Alexa Fluor[®] 488 (sc-130330 AF488), Alexa Fluor[®] 546 (sc-130330 AF546), Alexa Fluor[®] 594 (sc-130330 AF594) or Alexa Fluor[®] 647 (sc-130330 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-130330 AF680) or Alexa Fluor[®] 790 (sc-130330 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

MIP-1 β (3H3) is recommended for detection of MIP-1 β of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

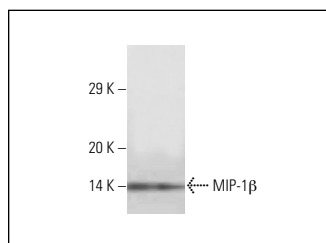
Suitable for use as control antibody for MIP-1 β siRNA (h): sc-43932, MIP-1 β shRNA Plasmid (h): sc-43932-SH and MIP-1 β shRNA (h) Lentiviral Particles: sc-43932-V.

Molecular Weight of MIP-1 β : 8 kDa.

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).

DATA



MIP-1 β (3H3): sc-130330. Western blot analysis of human recombinant MIP-1 β .

SELECT PRODUCT CITATIONS

- Lu, C.C., et al. 2022. The chemokine CCL4 stimulates angiotensin-2 expression and angiogenesis via the MEK/ERK/Stat3 pathway in oral squamous cell carcinoma. *Biomedicines* 10: 1612.

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.

PROTOCOLS

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

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