SANTA CRUZ BIOTECHNOLOGY, INC.

MIP-1β (M-20): sc-1387

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 the C-X-C (or α) subfamily, the first two of four cysteine residues are separated by a single amino acid. In C-C (or β) subfamily, the first two cysteines are adjacent. C subfamily members, also designated γ chemokines, lack the first and third cysteine residues of the conserved motif. 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. Reserach 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: Ccl4 (mouse) mapping to 11 C.

SOURCE

MIP-1β (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of MIP-1β of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1387 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MIP-1β (M-20) is recommended for detection of MIP-1β of mouse and rat origin by Western Blotting (starting dilution 1:200, 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).

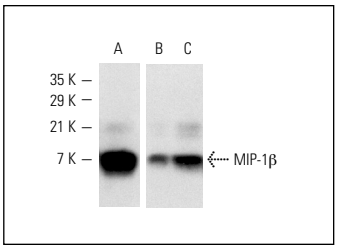
Suitable for use as control antibody for MIP-1β siRNA (m): sc-45996, MIP-1β shRNA Plasmid (m): sc-45996-SH and MIP-1β shRNA (m) Lentiviral Particles: sc-45996-V.

Molecular Weight of MIP-1β: 8 kDa.

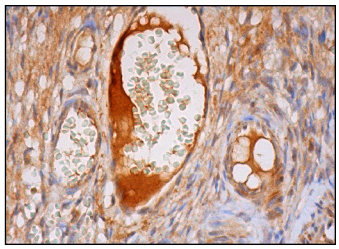
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Western blot analysis of mouse recombinant MIP-1β (**A**) and human recombinant MIP-1β at 25 ng (**B**) and 50 ng (**C**). Antibodies tested include: MIP-1β (M-20): sc-1387 (**A**) and MIP-1β (C-15): sc-1385 (**B**,**C**).



MIP-1β (M-20): sc-1387. Immunoperoxidase staining of formalin fixed, paraffin-embedded human ovary tissue showing cytoplasmic staining of ovarian stroma cells and staining of plasma in blood vessels.

SELECT PRODUCT CITATIONS

1. Chapoval, S.P., et al. 2009. Lung vascular endothelial growth factor expression induces local myeloid dendritic cell activation. Clin. Immunol. 132: 371-384.
2. Guzik-Kornacka, A., et al. 2011. Status epilepticus evokes prolonged increase in the expression of CCL3 and CCL4 mRNA and protein in the rat brain. Acta Neurobiol. Exp. 71: 193-207.

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.