

Cytokines

Human Recombinant MIP-4

Macrophage inflammatory protein-4

Catalog #100-1334

100 µg



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Product Description

Macrophage inflammatory protein-4 (MIP-4), also known as chemokine (C-C) motif ligand 18 (CCL18), is a small cytokine of the chemokine family found only in primates. Based on amino acid sequence, MIP-4 is closely related to MIP-1 alpha (CCL3) and MIP-1 beta (CCL4) (Liang et al.). MIP-4 is produced by antigen-presenting immune cells including dendritic cells, macrophages, and monocytes (Lieshout et al.). MIP-4 acts as a chemoattractant towards T and B lymphocytes and natural killer cells, playing a role in adaptive and innate immune responses (Krohn et al.). MIP-4 can also induce immune tolerance through its effects on dendritic cells and macrophages (Azzaoui et al., Schraufstatter et al.). Studies have looked at the involvement of MIP-4 in breast cancer and found that it can promote the invasiveness and metastasis of cancer cells in vivo by binding PITPNM3 (Chen et al.).

Product Information

Alternative Names:	AMAC-1, CCL18, DC-CK1, PARC
Accession Number:	P55774 (Ala21-Ala89)
Amino Acid Sequence:	AQVGTNKELC CLVYTSWQIP QKFIVDYSET SPQCCKPGVI LLTKRGRQIC ADPNKKWVQK YISDLKLNA
Predicted Molecular Mass:	7.9 kDa
Species:	Human
Formulation:	Lyophilized from a sterile aqueous solution containing 0.1% trifluoroacetic acid (TFA).
Source:	<i>E. coli</i>

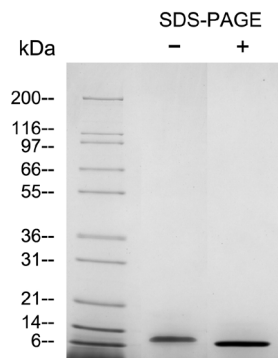
Specifications

Activity:	Not available
Purity:	≥ 95%
Endotoxin Level:	Measured by kinetic Limulus amoebocyte lysate (LAL) analysis and is ≤ 0.1 EU/µg protein.

Preparation and Storage

Storage:	Store at -20 to -80°C.
Stability:	Stable as supplied for 12 months from date of receipt.
Preparation:	Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.1 mg/mL by pipetting the solution down the sides of the vial. Do not vortex. As a general guide, do not store at 2 - 8°C for more than 1 month or at -80°C for more than 3 months. Avoid repeated freeze-thaw cycles.

Data



Human Recombinant MIP-4 was resolved with SDS-PAGE under reducing (+) and non-reducing (-) conditions and visualized by Coomassie Blue staining. Human Recombinant MIP-4 has a predicted molecular mass of 7.9 kDa.

Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/cytokines, or contact us at techsupport@stemcell.com.

References

- Azzaoui I et al. (2011) CCL18 differentiates dendritic cells in tolerogenic cells able to prime regulatory T cells in healthy subjects. *Blood* 118(13): 3549–58.
- Chen J et al. (2011) CCL18 from tumor-associated macrophages promotes breast cancer metastasis via PITPNM3. *Cancer Cell* 19(4): 541–55.
- Krohn S et al. (2013) The activity of CCL18 is principally mediated through interaction with glycosaminoglycans. *Front Immunol* 4(JUL): 193.
- Liang WG et al. (2015) Structures of human CCL18, CCL3, and CCL4 reveal molecular determinants for quaternary structures and sensitivity to insulin degrading enzyme. *J Mol Biol* 427(6 0 0): 1345–58.
- Schraufstatter IU et al. (2012) The chemokine CCL18 causes maturation of cultured monocytes to macrophages in the M2 spectrum. *Immunology* 135(4): 287–98.
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