

**Recombinant Human Macrophage Inflammatory  
Protein-1 beta/CCL4  
(rHuMIP-1 $\beta$ /CCL4)  
ChemWhat Technical Data Sheet (TDS)**

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<b>Catalog Number:</b>	204-04
<b>Source:</b>	<i>Escherichia coli</i> .
<b>Molecular Weight:</b>	Approximately 7.8 kDa, a single non-glycosylated polypeptide chain containing 69 amino acids.
<b>Quantity:</b>	2 $\mu$ g /10 $\mu$ g /1000 $\mu$ g
<b>AA Sequence:</b>	APMGSDPPTA CCFSYTARKL PRNFVVDYEE TSSLCSQPAV VFQTKRSKQV CADPSESWWQ EYVYDLELN
<b>Purity:</b>	> 96 % by SDS-PAGE and HPLC analyses.
<b>Biological Activity:</b>	Fully biologically active when compared to standard. The biological activity determined by a chemotaxis bioassay using human peripheral blood monocytes is in a concentration range of 5.0-20 ng/ml.
<b>Physical Appearance:</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Formulation:</b>	Lyophilized from a 0.2 $\mu$ m filtered concentrated solution in 20 mM PB, pH 7.4, 150 mM NaCl.
<b>Endotoxin:</b>	Less than 1 EU/ $\mu$ g of rHuMIP-1 $\beta$ /CCL4 as determined by LAL method.
<b>Reconstitution:</b>	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at $\leq$ -20 $^{\circ}$ C. Further dilutions should be made in appropriate buffered solutions.
<b>Shipping:</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage:</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"><li>● 12 months from date of receipt, -20 to -70 <math>^{\circ}</math>C as supplied.</li><li>● 1 month, 2 to 8 <math>^{\circ}</math>C under sterile conditions after reconstitution.</li><li>● 3 months, -20 to -70 <math>^{\circ}</math>C under sterile conditions after reconstitution.</li></ul>
<b>Usage:</b>	<b>ChemWhat Limited in UK offers this branded product for research, development or further evaluation purposes. NOT FOR HUMAN USE.</b>

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***Human Macrophage Inflammatory Protein-1 beta/CCL4***

CCL4 encoded by the CCL4 gene, also known as Macrophage Inflammatory Protein-1 $\beta$  (MIP-1 $\beta$ ) is a CC chemokine with specificity for CCR5 receptors and it is a major HIV-suppressive factor produced by CD8<sup>+</sup> T cells. It is a monokine with inflammatory and chemokinetic properties. Recombinant CCL4 induces a dose-dependent inhibition of different strains of HIV-1, HIV-2, and simian immunodeficiency virus (SIV). Specifically, MIP-1-beta (3-69) is also a ligand for CCR1 and CCR2 isoform B. Recombinant human CCL4 contains 69 amino acids and it shares 77 % and 80 % a.a. sequence identity with murine and rat CCL4, respectively. Both human and murine MIP-1 $\alpha$  and MIP-1 $\beta$  are active on human and murine hematopoietic cells.