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Product Data Sheet

human cell expressed MIP-1 beta^{HCX}

Source	A DNA sequence encoding the human MIP-1b protein sequence (containing the signal peptide sequence, and the mature human MIP-1 beta sequence) was expressed in modified human 293 cells.
Molecular Mass	Symansis MIP-1 beta^{HCX} migrates in SDS-PAGE at approximately 15 kDa due to post-translation modifications, in particular glycosylation. This compares with the unmodified MIP-1 beta that has a predicted molecular mass of 7.8 kDa.
pI	Symansis MIP-1 beta^{HCX} migrates in 2D PAGE with an observed pI of 4.8. This compares with the predicted pI of 4.77.
Purity	>95%, as determined by SDS-PAGE and visualized by silver stain.
Formulation	When reconstituted in 0.5 ml sterile phosphate-buffered saline, the solution will contain 1% human serum albumin (HSA) and 10% trehalose.
Reconstitution	It is recommended that 0.5 ml of sterile phosphate-buffered saline be added to the vial. Working concentrations of MIP-1 beta^{HCX} should be less than 100ng/ml to avoid aggregation. Refer to Menten P, *et al.* (2002) *Cytokine and Growth Factor Reviews* **13**: 455-481.
Storage	Lyophilized products should be stored at 2 to 8°C. Following reconstitution short-term storage at 4°C is recommended, and longer-term storage of aliquots at -18 to -20°C. Repeated freeze thawing is not recommended.
Background Information	Macrophage inflammatory protein 1 beta (MIP-1 beta; MIP-1b) belongs to the chemokine family. Chemokines are small secreted molecules containing 4 conserved cysteine residues and 2 disulfide linkages. The first two cysteine residues of chemokine molecules may be in one of the following configurations, CC or CXC and this defines the two major chemokine sub-families. MIP-1 beta is a CC chemokine and its recent designation is chemokine ligand 4, (CCL4). MIP-1 beta is expressed from activated monocytes, T-lymphocytes, B-lymphocytes, NK cells, dendritic cells, neutrophils, and its expression can be inhibited by IL-10 and IL-4. It is also expressed from non-immune somatic cells such as brain endothelial cells, vascular smooth muscle cells, the pineal gland, prostate cells, the liver, spleen and fetal microglial cells. MIP-1 beta exhibits chemotactic properties for monocytes, T-lymphocytes, neutrophils, eosinophils, immature dendritic cells and NK cells, and plays a role in the transendothelial migration and activation of monocytes, T-lymphocytes, neutrophils and dendritic cells. MIP-1 beta is synthesized as a precursor protein of 92 amino acids that includes a cleaved 23 amino acid signal sequence. It has a molecular mass of approximately 8 kDa and may exist as a symmetrical homodimer or as a heterodimer with the related chemokine, MIP-1 alpha. For further information on the role of MIP-1 beta in HIV infection refer to Jennes W (2004) *AIDS Res Hum Retroviruses* **20**(10): 1087-91.
Theoretical Sequence	APMGSDPPTACCFSYTARKLPRNFVVDYYETSSLCSQPAVVFQTKRGKQVCADPSESWVQ EYVYDLELN

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