

PPH134

PODS[®] Human CCL4

Description

The product contains the polyhedrin protein co-crystallized with Human CCL4. A member of the CC sub-family of chemokines, CCL4 signals via the chemokine receptor CCR5. It plays a role in inflammation by attracting natural killer cells, monocytes, dendritic cells and lymphocytes to sites of injury. CCL4 is also one of the major HIV-suppressive factors produced by CD8⁺ T cells. It's ability to bind CCR5 inhibits the cellular entry of M-tropic HIV strains, which utilise CCR5 as a co-receptor, in addition to downregulating CCR5 surface expression. It is secreted by numerous other cell types including neutrophils, monocytes, B cells, fibroblasts, endothelial cells and epithelial cells. Mature human CCL4 shares 77% and 80% aa sequence identity with mouse and rat CCL4, respectively.

Length	137 aa
Molecular Weight	30.8 kDa
Source	<i>Spodoptera frugiperda (Sf9) cell culture</i>
Accession Number	P13236

Usage Recommendation

PODS[®] co-crystals provide a depot of proteins which are steadily secreted. It has been estimated that the biological activity of 50 million PODS[®] co-crystals generates the same peak dose as 3.3 µg of standard recombinant protein. However, at 5 days following the start of seeding the PODS[®] co-crystals, there are more than 50% of these peak levels still present in the culture system. Ultimately, the amount of PODS[®] co-crystals that is optimal for a particular experiment should be determined empirically. Based on previous data, we suggest using 50 million PODS[®] co-crystals in place of 3.3 µg of standard growth factor as a starting point. To control for cross-reactivity with cells or as a negative control, we recommend using PODS[®] growth factors alongside PODS[®] Empty crystals, as the latter do not contain or release cargo protein.

Specifications

Alternative Names	C-C Motif Chemokine 4, Macrophage inflammatory protein-1β, MIP-1β, Immune activation protein 2 (ACT-2), Small-inducible cytokine A4, Lymphocyte activation gene 1 protein (LAG-1), SIS-gamma, Protein H400
Endotoxin Level	<0.06 EU/ml as measured by gel clot LAL assay
Formulation	PODS [®] were lyophilized from a volatile solution
AA Sequence	MADVAGTSNR DFRGREQLF NSEQYNNNS KNSRPSTSLY KKAGFMKLCV TVLSLLMLVA AFCSPALSAP MGSDPPTACC FSYTARKLPR NFWVDYYETS SLCSQPAVVF QTKRSKQVCA DPSESWVQEY VYDLELN

Preparation and Storage

Reconstitution	PODS [®] co-crystals may be reconstituted at 200 million co-crystals/ml in sterile PBS. 20% glucose has a buoyant density closer to PODS [®] co-crystals and can be useful for aliquoting. PODS [®] co-crystals are highly stable when stored in aqueous solution (pH range 6 - 8).
Stability and Storage	Upon receipt, store at 4°C. PODS [®] co-crystals are stable for at least 1 year when dry and 6 months when resuspended.