

## PPH8 PODS<sup>®</sup> Human GM-CSF

### Description

The product contains the polyhedrin protein co-crystallized with Human GM-CSF. Granulocyte-Macrophage Colony-Stimulating Factor (GM-CSF) is hematopoietic growth factor produced by endothelial cells, monocytes, fibroblasts, and T cells. GM-CSF stimulates the production of neutrophilic granulocytes, macrophages, and mixed granulocyte-macrophage colonies from bone marrow cells. GM-CSF promotes immune system development and regulates neutrophil function during infection. Human and mouse GM-CSF show no cross-reactivity.

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|-------------------------|---|
| <b>Length</b>           | 172   |
| <b>Molecular Weight</b> | 19.7 kDa  |
| <b>Source</b>           | <i>Spodoptera frugiperda (Sf9) cell culture</i> |
| <b>Accession Number</b> | P04141  |

### Usage Recommendation

PODS<sup>®</sup> co-crystals provide a depot of proteins which are steadily secreted. It has been estimated that the biological activity of 50 million PODS<sup>®</sup> 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<sup>®</sup> co-crystals, there are more than 50% of these peak levels still present in the culture system. Ultimately, the amount of PODS<sup>®</sup> co-crystals that is optimal for a particular experiment should be determined empirically. Based on previous data, we suggest using 50 million PODS<sup>®</sup> 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<sup>®</sup> growth factors alongside [PODS<sup>®</sup> Empty crystals](http://www.cellgs.com/products/podsand8482-empty.html), as the latter do not contain or release cargo protein.

### Specifications

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|--------------------------|--|
| <b>Alternative Names</b> | Granulocyte-Macrophage Colony-Stimulating Factor, GMCSF, CSF-2, MGI1GM, colony stimulating factor 2 (granulocyte-macrophage), colony-stimulating factor, CSF-2, MGIIGM, sargramostim, molgramostin |
| <b>Endotoxin Level</b>   | <0.06 EU/ml as measured by gel clot LAL assay  |
| <b>Formulation</b>       | PODS <sup>®</sup> were lyophilized from a volatile solution  |
| <b>AA Sequence</b>       | MADVAGTSNR DFRGREQRLF NSEQYNNNS KNSRPSTSLY KKAGFAPARS PSPSTQPWEH<br>VNAIQEARRL LNLSRDTAEE MNETVEVISE MFDLQEP TCL QTRLELYKQG LRGLTKLKG<br>PLTMMASHYK QHCPPTPETS CATQIITFES FKENLKDFLL VIPFDCWEPV QE |

### Preparation and Storage

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