

## PPM15

PODS<sup>®</sup> Mouse GM-CSF

### Description

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The product contains polyhedrin protein co-crystallized with mature mouse Granulocyte-Macrophage Colony-Stimulating Factor (GM-CSF). GM-CSF is a cytokine that stimulates the growth and differentiation of hematopoietic precursor cells including granulocytes, eosinophils, erythrocytes, and macrophages. Mature mouse GM-CSF shares 54% and 69% amino acid sequence identity with human rat GM-CSF respectively. The activity of the human and mouse GM-CSF is species-specific. Rat GM-CSF is fully active on mouse cells, but mouse GM-CSF is weakly active on rat cells. GM-CSF is involved in immune response, allergy, inflammatory processes, angiogenesis, and autoimmunity.

<b>Length</b>	169 aa
<b>Molecular Weight</b>	19.3 kDa
<b>Source</b>	<i>Spodoptera frugiperda (Sf9) cell culture</i>

### Usage Recommendation

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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](#), as the latter do not contain or release cargo protein.

### Specifications

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<b>Alternative Names</b>	Colony stimulating factor 2 (CSF-2), Molgramostin, Sargramostim
<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>	<code>MADVAGTSNR DFRGREQRLF NSEQYNYNNS KNSRPSTSLY KKAGFAPTRS PITVTRPWKH VEAIKEALNL LDDMPVTLENE EVEVVSNEFS FKKLTCVQTR LKIFEQGLRG NFKLKGALN MTASYQTYC PPTPETDCET QVTYADFID SLKTFLLDIP FECKKPGQK</code> Immobilization tag shown in blue.

### Preparation and Storage

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<b>Reconstitution</b>	PODS <sup>®</sup> co-crystals may be reconstituted at 200 million co-crystals/ml in sterile PBS. 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.