

## PPH86

## PODS<sup>®</sup> Human IL-15

### Description

The product contains the polyhedrin protein co-crystalized with Human IL-15. Interleukin-15 (IL-15) is a widely expressed proinflammatory cytokine that is structurally and functionally related to interleukin-2 (IL-2). IL-15 signals through JAK kinases to activate STAT3, STAT5, and STAT6 transcription factors. IL-15 regulates the activation of T cells, neutrophils, and macrophages, and is a stimulatory cytokine promoting dendritic cell function. IL-15 expression is dysregulated in chronic inflammatory disorders, including rheumatoid arthritis, psoriasis, and pulmonary inflammatory diseases. Human IL-15 shows activity on mouse cells.

<b>Length</b>	159 aa (45 aa H1 affinity tag (blue), 114 aa Human IL-15)
<b>Molecular Weight</b>	18.0 kDa
<b>Source</b>	<i>Spodoptera frugiperda (Sf9) cell culture</i>
<b>Accession Number</b>	CAA71044.1

### Usage Recommendation

PODS<sup>®</sup> are pure protein co-crystals consisting of polyhedrin, a structural scaffold protein, and a cargo protein. Under the action of proteases, which degrade the scaffold protein, PODS provide sustained release of the cargo protein. Any cargo growth factor molecule contained within PODS is not available to cells and not bioactive.

The concentration to which a growth factor accumulates in cell culture media (or in-vivo environment) will depend on the amount of cargo (contained in PODS) added, the rate of cargo release, and the subsequent rate of degradation of the released cargo protein.

As a rule of thumb, in the presence of 10% serum, peak levels of available growth factors released from PODS are reached within 24-48 hours. Typically, at this point 20% of the growth factor cargo initially contained within the PODS is present in a soluble form and available to bind cells. For example, if PODS containing 100 ng of cargo are added to 10 mL of cell culture media containing 10% serum, it can be expected that 20 ng will be released after 24 hours to give a concentration of available growth factor of 2 ng/mL. The concentration that you need for a particular application will likely be lower than the equivalent conventional growth factor. This is because PODS are better at maintaining minimum growth factor concentrations. Pre-incubating PODS with serum for 24 hours prior to culture will ensure that available growth factor is immediately present. Ultimately, the amount of PODS growth factor that is optimal for a particular experiment should be optimized empirically.

### Specifications

<b>Alternative Names</b>	Interleukin-15, interleukin 15, IL15, IL 15
<b>Formulation</b>	PODS <sup>®</sup> were lyophilized from a volatile solution
<b>AA Sequence</b>	MADVAGTSNR DFRGREQRLF NSEQYNYNNS KNSRPSTSLY KKAGFNWVNV ISDLKKIEDL IQSMHIDATL YTESDVHPSC KVTAMKCFLL ELQVISLESG DASIHDTVEN LIILANNSLS SNGNVTESGC KECEELEEKNI KEFLQSFVH IVQMFINTS

## Preparation and Storage

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**Reconstitution**      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).

**Stability and Storage**      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.