

PPH80

PODS[®] Human IL-3

Description

The product contains the polyhedrin protein co-crystallized with Human IL-3. IL-3 stimulates the proliferation and differentiation of pluripotent hematopoietic stem cells and various lineage-committed progenitors. In addition, IL-3 plays important roles in neuronal cell proliferation, stimulation of mature basophils and the activation of monocytes. Its secretion is predominantly mediated by T lymphocytes and mast cells, signal transduction is mediated by the IL-3 receptor. Human IL-3 does not show bioactivity on murine cells due to significant amino acid divergence between human and murine IL-3.

Length	178 aa
Molecular Weight	20.3 kDa
Source	<i>Spodoptera frugiperda (Sf9) cell culture</i>
Accession Number	P08700

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	Interleukin-3, IL3, IL 3, Hematopoietic growth factor, Mast cell growth factor, MCGF, Multipotential colony-stimulating factor, Multi-CSF, HCGF, P-cell-stimulating factor
Endotoxin Level	<0.06 EU/ml as measured by gel clot LAL assay
Formulation	PODS [®] were lyophilized from a volatile solution
AA Sequence	MADVAGTSNR DFRGREQRLF NSEQYNYNNS KNSRPSTSLY KKAGFAPMTQ TTPLKTSWVN CSNMIDEIIT HLKQPPLPLL DFNNLNGEDQ DILMENNLRN PNLEAFNRV KSLQNASAIK SILKNLLPCL PLATAAPTRH PIHIKDGDN EFRRLTFYL KTLNAQAQQ TTLSLAIF

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.