

PPH200 PODS[®] Human LIF

Description

The product contains the polyhedrin protein co-crystallized with Human LIF. Leukemia Inhibitory Factor (LIF) is a member of the interleukin-6 (IL-6) family that is made by a variety of adult and embryonic tissues. LIF signals through the glycoprotein 130 (gp130)/LIF receptor (LIFR) heterodimer to activate STAT3 and MAPK signaling. LIF functions during hematopoietic differentiation, neuronal cell differentiation, kidney development, and inflammatory processes. Human LIF may also be an important factor during human embryonic stem cell (hESC) self-renewal, pluripotency, and embryonic implantation.

Length	225 aa
Molecular Weight	25 kDa
Source	<i>Spodoptera frugiperda (Sf9) cell culture</i>
Accession Number	P15018

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](http://www.cellgs.com/products/podsand8482-empty.html), as the latter do not contain or release cargo protein.

Specifications

Alternative Names	Leukocyte Inhibitory Factor, leukemia inhibitory factor, cholinergic differentiation 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 KKAGLSPLPI TPNATCAIR HPCHNNLMNQ IRSQLAQLNG SANALFILYY TAQGEPPFNN LDKLCGPNTV DFPPFHANGT EKAKLVELYR IVVYLGTSLG NITRDQKILN PSALSLHSLK NATADILRGL LSNVLCRLCS KYHVGHVDTV YGPDTSGBKDV FQKKKLGKQL LGKYKQIIAV LAQAF

Preparation and Storage

Reconstitution	PODS [®] co-crystals may be reconstituted at 200 million co-crystals/ml in water. 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.