

PPH307 PODS[®] Human Activin B

Description

The product contains the polyhedrin protein co-crystallized with Human Activin B. Activin B is a member of the TGF- β superfamily, which are disulfide-linked dimeric proteins that were originally purified from gonadal fluids and had as primary role to stimulate the release of pituitary follicle stimulating hormones (FSH). Activin B has shown to have a wide range of biological activities including: mesoderm induction, neural cell differentiation, bone remodeling, hematopoiesis, reproductive physiology, and hormone secretion from the hypothalamic, pituitary and gonadal glands. Activins exert their biological activities through binding to the heterodimeric complex composed of two membrane spanning serine-threonine kinases designated as type I and type II. Two forms of activin receptor type I (Act RI-A and Act RI-B) and two forms of activin receptor type II (Act RII-A and Act RII-B) have been identified. Activin B signals through the ActRII receptor (Activin Receptor type II).

Length	160 aa
Molecular Weight	36 kDa
Source	<i>Spodoptera frugiperda (Sf9) cell culture</i>
Accession Number	Q53T31

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 μ g 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 μ g 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	Inhibin beta-2, Activin-B, INHBB, Inhibin Beta B, Inhibin Beta-2
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 KKAGFGLECD GRNLCRRQQ FFIDFRLIGW NDWIIAPTGY YGNyceGSCP AYLAVPGSA SSFHTAVVNQ YRMRGLNPGT VNSCCIPTKL STMSMLYFDD EYNIVKRDVP NMIVEECGCA

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.