

## PPH6      PODS® Human Activin A

### Description

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The product contains the polyhedrin protein co-crystallized with Human Activin A. Activin A is a member of the Transforming Growth Factor beta (TGF-β) family of proteins with a wide range of biological activities. Activins are produced in many tissue types including the skin, gonads, lungs, and pituitary gland. Activins interact with receptor type I and type II serine/threonine protein kinases, to activate SMAD signaling and regulate diverse cellular functions, such as cell proliferation, differentiation, wound healing, apoptosis, and metabolism. Activin A is a homodimer comprised of two activin beta A chains. Human Activin A shares 100% amino acid sequence identity with mouse, rat, porcine, bovine, and feline Activin A proteins.

<b>Length</b>	155 aa
<b>Molecular Weight</b>	35 kDa
<b>Source</b>	<i>Spodoptera frugiperda (Sf9) cell culture</i>
<b>Accession Number</b>	P08476

### Usage Recommendation

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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

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<b>Alternative Names</b>	Inhibin beta-1, FRP, FSH-releasing protein, EDF, erythroid differentiation factor, FRP, follicle stimulating hormone releasing protein, Activin-A
<b>Endotoxin Level</b>	<0.06 EU/ml as measured by gel clot LAL assay
<b>Formulation</b>	PODS® were lyophilized from a volatile solution
<b>AA Sequence</b>	MADVAGTSNR DFRGREQRLF NSEQYNNNS KNSRPSTSLY KKAGFMGNIC AKKQFFVSFK DIGWNDWIIA PSGYHANYCE GECPSHIAGT SGSSLSFHST VINHYRMRGH SPFANLKSCC VPTKLRPMSM LYYDDGQNII KKDIQNMIVE ECGCS

### Preparation and Storage

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<b>Reconstitution</b>	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).
<b>Stability and Storage</b>	Upon receipt, store at 4°C. PODS® co-crystals are stable for at least 1 year when dry and 6 months when resuspended.