

PPH309 PODS[®] Human DKK-1

Description

The product contains the polyhedrin protein co-crystalized with Human DKK-1. Dickkopf related protein 1 (DKK-1) is a member of the Dickkopf family of proteins that includes DKK-1, DKK-2, DKK-3, DKK-4, and a related protein Soggy. DKK-1 and DKK-4 are well documented antagonists of the canonical Wnt/ β -catenin signaling pathway by forming inhibitory complexes composed of the Frizzled proteins and one of two low-density lipoprotein receptor-related proteins, LRP5 or LRP6. DKK-1 antagonizes Wnt by forming ternary complexes of LRP5/6 with Kremen1 or Kremen2. The balance between Wnt signaling and DKK-1 inhibition is critical for bone formation and homeostasis, resulting that insufficient or excess of DKK-1 activity in bone leads to an increased or decreased bone density, respectively. In adults, DKK-1 is expressed in osteoblasts, osteocytes, and neurons.

Length	280 aa
Molecular Weight	31 kDa
Source	<i>Spodoptera frugiperda (Sf9) cell culture</i>
Accession Number	O94907

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	Dickkopf (Xenopus laevis) homolog 1, dickkopf homolog 1 (Xenopus laevis), dickkopf related protein-1, Dickkopf-1, dickkopf-related protein 1, Dkk1, Dkk-1, hDkk-1, SKdickkopf-1 like
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 KKAGFTLNSV LNSNAIKNLP PPLGGAAGHP GSAVSAAPGI LYPGGNKYQT IDNYQPYPCA EDEECGTDEY CASPTRGGDA GVQICLACRK RRKRCMRHAM CCPGNYCKNG ICVSSDQNHF RGEIETITE SFGNDHSTLD GYSRRTTLSS KMYHTKGQEG SVCLRSSDCA SGLCCARHFW SKICKPVLKE GQVCTKHRRK GSHGLEIFQR CYCGEGLSCR IQKDHHQASN SSR LHTCQRH

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.

