

PPH1 PODS[®] Human BDNF

Description

The product contains the polyhedrin protein co-crystallized with Human BDNF. Brain-derived neurotrophic factor (BDNF) is a nerve growth factor that binds two receptors, the low-affinity nerve growth factor receptor (LNGFR) and the tropomyosin receptor kinase B (TrkB), to support neuron growth and survival. BDNF expression in the hippocampus is essential for long-term memory storage and learning. Some protein domains of BDNF are identical with those of NGF and another neurotrophic factor, designated NT-3 (Neurotrophin-3). Human, mouse, rat, and pig BDNF are cross-reactive.

Length	164 aa
Molecular Weight	37.6 kDa
Source	<i>Spodoptera frugiperda (Sf9) cell culture</i>
Accession Number	P23560

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	Brain-derived neurotrophic factor, neurotrophin, abrineurin
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 KKAGLMHSDP ARRGENSVCD SISEWVTAAD KKTAVDMSSG TVTVLEKVPV SKGQLKQYFY ETKCNPMGYT KEGCRGIDKR HWNSQCRTTQ SYVRALTMDS KKRIGWRFIR IDTSCVCTLT IKRGR

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.