Product Data Sheet

Product Name:	Thymosin beta 4
Cat. No.:	GP21313
Batch No.:	1

Product Data

Purity	>98%	Source	
Phycical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	Thymosin beta-4; T beta 4; Fx ; TB4X; PTMB4; TMSB4.		
Amino Acid Sequence	Thymosin b4 has an a.a. sequence of Ac-Ser-Asp-Lys-Pro-Asp-Met-Ala-Glu-Ile-Glu-Lys-Phe-Asp-Lys-Ser-Lys-Leu-Lys-Lys-Thr-Glu-Thr-Gln-Glu-Lys-Asn-Pro-Leu-Pro-Ser-Lys-Glu-Thr-Ile-Glu-Gln-Glu-Lys-Gln-Ala-Gly-Glu-Ser-OH.		
Solubility	It is recommended to reconstitute the lyophilized Thymosin beta-4 in sterile 18MΩ-cm H2O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.		
Formulation	The protein (1mg/ml) was lyophilized with no additives.		

Introduction

Thymosin is a hormone secreted from the thymus. Its primary function is to stimulate the production of T cells, which are an important part of the immune system.Thymosin also assists in the development of B cells to plasma cells to produce antibodies.The predominant form of thymosin, thymosin b4, is a member of a highly conserved family of actin monomer-sequestering proteins. b-thymosins are the primary regulators of unpolymerized actin, and are essential for maintaining the small cytoplasmic pool of free G-actin monomers required for rapid filament elongation and allowing for the flux of monomers between the thymosin-bound pool and F-actin.

Stability

Lyophilized Thymosin b4 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C . Upon reconstitution T beta 4 should be stored at 4°C between 2-7 days and for future use below -18°C .For long term storage it is

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recommended to add a carrier protein (0.1% HSA or BSA).Please prevent freeze-thaw cycles.

Background

Thymosin b4 is a 43 amino acid peptide which is regarded as the main intracellular G-actin sequestering peptide. It has a molecular weight of 4963.55 Da, and its molecular formula is: C212H350N56O78S1. Extracellular Thymosin b4 may contribute to physiological processes such as angiogenesis, wound healing, and regulation of inflammation.

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