



## Product Datasheet

**Product Name** Thymosin a1 Acetate

**Cata No** CB500691

**Source**

**Synonyms**

### Description

Thymalfasin is a synthetic analogue of thymosin-alpha-1, a 28-amino acid protein derived from the precursor protein prothymosin-alpha. Exhibiting a variety of immunoregulating properties, thymosin-alpha-1 induces differentiation of murine T-cell precursors and human thymocytes and the terminal differentiation of functionally immature cord blood lymphocytes and induces production of IL-2, high affinity IL-2 receptors, and B-cell growth factors by peripheral blood mononuclear cells. T-helper and cytotoxic/suppressor T-cell populations are targets of thymosin activity. Thymosin-alpha-1 has been shown to increase the efficiency of antigen presentation by macrophages and to be an endogenous modulator of alpha-thrombin activity. Thymosin a<sub>1</sub> acetate, also known as thymalfasin has immunoregulatory properties enhancing immune functions. Thymosin a<sub>1</sub> has a molecular formula of C<sub>129</sub>H<sub>215</sub>N<sub>33</sub>O<sub>55</sub> a.a. sequence of Ac-Ser-Asp-Ala-Ala-Val-Asp-Thr-Ser-Ser-Glu-Ile-Thr-Thr-Lys-Asp-Leu-Lys-Glu-Lys-Lys-Glu-Val-Val-Glu-Glu-Ala-Glu-Asn-OH and having a Mw of 3108.32 Dalton.

### Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

### Purity

Greater than 99.0% as determined by:  
(a) Analysis by RP-HPLC.  
(b) Analysis by SDS-PAGE

### Formulation

The protein (1 mg/ml) was lyophilized with no additives.

### Stability

Lyophilized Thymosin a<sub>1</sub> although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Thymalfasin should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

**Please prevent freeze-thaw cycles.**