

## 32-2086: Thymosin $\alpha$ 1 Protein

### Description

Source : Thymosin  $\alpha$ 1 acetate, also known as thymalfasin has immunoregulatory properties enhancing immune functions. Thymosin  $\alpha$ 1 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. 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.

### Product Info

<b>Amount :</b>	5 mg
<b>Purification :</b>	Greater than 99.0% as determined by(a) Analysis by RP-HPLC.(b) Analysis by SDS-PAGE.
<b>Content :</b>	The protein (1 mg/ml) was lyophilized with no additives.
<b>Storage condition :</b>	Lyophilized Thymosin $\alpha$ 1 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.

### Application Note

It is recommended to reconstitute the lyophilized Thymosin  $\alpha$ 1 in sterile 18M $\Omega$ -cm H<sub>2</sub>O not less than 100  $\mu$ g/ml, which can then be further diluted to other aqueous solutions.

