

Product Data Sheet

Product Name: Thymulin (acetate hydrate)

Cat. No.: GC48358

Chemical Properties

Cas. No.

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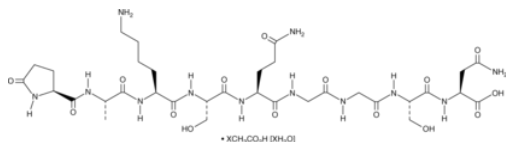
Formula C33H54N12O15•XC2H4O2 [XH2O] M.Wt 858.9

Solubility DMSO: slightly soluble, PBS (pH 7.2): 10 mg/ml Storage -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

Thymulin is a zinc-dependent metallopeptide hormone with immunomodulatory, anti-inflammatory, and analgesic activities.^{1,2} It is primarily produced by thymic epithelial cells but can be produced by macrophages and fibroblasts when exposed to extracellular stressors, such as heat or oxidative stress.² Thymulin potentiates mitogen-induced proliferation of IL-2 receptor-positive mature T cells.³ It reduces pro-inflammatory cytokine production in rodent models of LPS- or endotoxin-induced systemic inflammation, as well as prevents myocardial inflammation in a mouse model of encephalomyocarditis virus-induced myocarditis and suppresses autoantibody production in a mouse model of reovirus-induced thyroiditis.^{4,5} Thymulin (0.1, 0.5, and 1 µg, i.c.v.) prevents endotoxin-induced hyperalgesia in rats.⁵

1. Bach, J.-F., and Dardenne, M. Thymulin, a zinc-dependent hormone Med. Oncol. Tumor

Caution: Product has not been fully validated for medical applications. For research use only.

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Pharmacother.6(1)25-29(1989) 2.Lunin, S.M., Khrenov, M.O., Glushkova, O.V., et al.Extrathymic production of thymulin induced by oxidative stress, heat shock, apoptosis, or necrosisInt. J. Immunopathol. Pharmacol.30(1)58-69(2017) 3.Hadden, J.W.Thymic endocrinologyAnn. N.Y. Acad. Sci.840(1)352-358(1998) 4.Santos, M.A.M., Henriques-Coelho, T., and Leite-Moreira, A.Immunomodulatory role of thymulin in lung diseasesExpert Opin. Ther. Targets14(2)131-141(2010) 5.Safieh-Garabedian, B., Ochoa-Chaar, C.I., Poole, S., et al.Thymulin reverses inflammatory hyperalgesia and modulates the increased concentration of proinflammatory cytokines induced by i.c.v. endotoxin injectionNeuroscience121(4)865-873(2003)

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