

Product Data Sheet

Product Name: (±)-Lisofylline

Cat. No.: GC13662

Chemical Properties

Cas. No. 6493-06-7

Chemical Name 3,7-dihydro-1-(5-hydroxyhexyl)-3,7-dimethyl-1H-purine-2,6-dione

SMILES CC(O)CCCCn1c(=O)c2n(C)cnc2n(C)c1=O

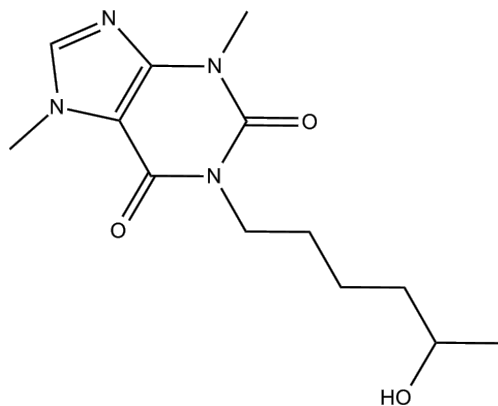
Formula $C_{13}H_{20}N_4O_3$ M.Wt 280.3

Solubility $\leq 2\text{mg/ml}$ in ethanol; 10mg/ml in DMSO; 10mg/ml in dimethyl formamide Storage Store at -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

(±)-Lisofylline is an anti-inflammatory agent.

Anti-inflammatory refers to the property of a agent or treatment reducing inflammation or swelling. Anti-inflammatory drugs make up about half of analgesics, remedying pain by reducing inflammation

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

as opposed to opioids.

In vitro: (±)-Lisofylline is a potent anti-inflammatory agent in which only the (-) optical isomer is biologically active. (±)-Lisofylline was found to inhibit the generation of phosphatidic acid from cytokine-activated lysophosphatidic acyl transferase. (±)-Lisofylline could also suppress the production of the proinflammatory cytokine IFN- γ , inhibit IL-12-mediated STAT-4 activation, as well as enhance glucose-stimulated β -cell insulin secretion [1].

In vivo: In a previous study, lisofylline was administered to female non-obese diabetic mice for 3 weeks. Cytokines and blood glucose concentrations were monitored. Histology and immunohistochemistry were also carried out in pancreatic sections. Results showed that lisofylline was able to suppress IFN- γ production, reduce the onset of insulinitis and diabetes, and inhibit diabetes [1].

Clinical trial: A clinical trial has been conducted to determine whether the administration of lisofylline would decrease mortality in patients with acute lung injury (ALI) or acute respiratory distress syndrome (ARDS). However, this trial was stopped for futility at the first scheduled interim analysis. It was found that there was no significant difference between groups in the number of patients who had died at 28 days and there was no significant difference between the lisofylline and placebo groups in terms of ventilator-free days, infection-related deaths, resolution of organ failures, or development of serious infection [2].

References:

[1] Yang, Z. D., Chen, M., Wu, R., et al. The anti-inflammatory compound lisofylline prevents type I diabetes in non-obese diabetic mice. *Diabetologia* 45, 1307-1314 (2002).

[2] No authors listed. Randomized, placebo-controlled trial of lisofylline for early treatment of acute lung injury and acute respiratory distress syndrome. *Crit Care Med.* 2002 Jan;30(1):1-6.

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA