

---

**Product Data Sheet**


---

Product Name: Pentoxifylline (BL-191)

Cat. No.: GC32444

**Chemical Properties**

Cas. No. 6493-05-6

SMILES O=C(N1CCCCC(C)=O)N(C)C2=C(N(C)C=N2)C1=OFormula  $C_{13}H_{18}N_4O_3$ 

M.Wt 278.31

Solubility Water : 93.3 mg/mL (335.24 mM); DMSO :  $\geq$  2.8 mg/mL  
(10.06 mM)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**

Pentoxifylline is a methylxanthine derivative. It has been shown to have anti-inflammatory activity, inhibiting LPS-induced TNF- $\alpha$  production in isolated peripheral blood mononuclear cells ( $IC_{50}$  = 85  $\mu$ M) and suppressing LPS-induced leukopenia in mice.<sup>1</sup> Pentoxifylline weakly inhibits the generation of phosphatidic acid ( $IC_{50}$  = 500  $\mu$ M) from LPS-activated lysophosphatidic acyl transferase (LPAAT), and weakly antagonizes A<sub>1</sub> and A<sub>2</sub> adenosine receptors.<sup>2,3</sup> It also inhibits human acidic mammalian chitinase, human chitotriosidase, and chitinase B1 from *Aspergillus fumigatus* ( $IC_{50}$ s = 49, 98, and 126  $\mu$ M, respectively).<sup>4</sup>

1. Cottam, H.B., Shih, H., Tehrani, L.R., et al. Substituted xanthines, pteridinediones, and related compounds as potential antiinflammatory agents. Synthesis and biological evaluation of inhibitors of tumor necrosis factor  $\alpha$ . *Med. Chem.* 39:2-9 (1996)  
 2. Rice, G.C., Brown, P.A., Nelson, R.J., et al. Protection from endotoxic shock in mice by pharmacologic inhibition of phosphatidic acid. *Proc. Natl. Acad. Sci. USA* 91(9):3857-3861 (1994)

**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**

---

- 3.Schwabe, U., Ukena, D., and Lohse, M.J.Xanthine derivatives as antagonists at A1 and A2 adenosine receptorsNaunyn Schmiedebergs Arch. Pharmacol.330(3)212-221(1985)
- 4.Rao, F.V., Andersen, O.A., Vora, K.A., et al.Methylxanthine drugs are chitinase inhibitors: Investigation of inhibition and binding modesChem. Biol.12(9)973-980(2005)

***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***