Product Data Sheet

Product Name: L48H37
Cat. No.: GC64417

Chemical Properties

Cas. No.	343307-76-6		
Formula	C27H33NO7	M.Wt	483.55
Solubility	DMSO : 50 mg/mL (103.40 mM; Need ultrasonic)	Storage	4°C, protect from light
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.		

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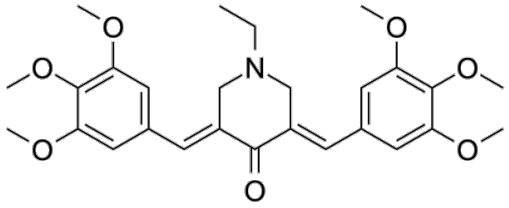
Structure



Background

L48H37 is an analog of Curcumin with improved chemical stability. L48H37 is a potent and specific myeloid differentiation protein 2 (MD2) inhibitor and inhibits the interaction and signaling transduction of LPS-TLR4/MD2. L48H37 is used for the research of sepsis or lung injury treatment[1].

L48H37 inhibits LPS-induced inflammation, particularly TNF-α and IL-6 production and gene expression in mouse macrophages[1].
L48H37 (0-20 μM; 24 hours) decreases the viability of A549 and H460 cells with IC50 values of 5.3 μM and 2.3 μM, respectively, which is more effective compared to curcumin in lung cancer cells. It shows a low cytotoxicity on normal human lung epithelial cells (BEAS-2B) with IC50 of 21 μM[2].
L48H37 (1, 2, or 4 μM; 16 hours) dose-dependently inhibited the expression of p-Cdc2 and Cdc2, and increases the expression of p53. It also shows increased levels of cleaved poly (ADP-ribosyl) polymerase (PARP) and reduced levels of anti-apoptotic protein Bcl-2 in H460 and A549 cells[2].

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L48H37 (4 µM; 16 hours) rapidly induces intracellular ROS levels dose-dependently as detected by increased DCF levels in H460 and A549 cells[2].

L48H37 (intraperitoneal injection; 5 mg or 10 mg/kg; once daily; 11-day) inhibits H460 xenograft tumor growth and exhibits anti-tumor activity in mice[1].

[1]. Yi Wang, et al. Curcumin Analog L48H37 Prevents Lipopolysaccharide-Induced TLR4 Signaling Pathway Activation and Sepsis via Targeting MD2. J Pharmacol Exp Ther. 2015 Jun;353(3):539-50
[2]. Chen Feng, et al. Curcumin analog L48H37 induces apoptosis through ROS-mediated endoplasmic reticulum stress and STAT3 pathways in human lung cancer cells. Mol Carcinog. 2017 Jul;56(7):1765-1777.

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