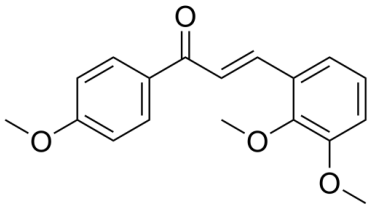
Data Sheet

Product Name:	L6H21
Cat. No.:	CS-0529025
CAS No.:	24533-47-9
Molecular Formula:	$C_{18}H_{18}O_4$
Molecular Weight:	298.34
Target:	Apoptosis; Bcl-2 Family; Caspase; Interleukin Related; NF-κB; NOD-like Receptor (NLR); Reactive Oxygen Species; TNF Receptor; Toll-like Receptor (TLR)
Pathway:	Apoptosis; Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB
Solubility:	10 mM in DMSO



BIOLOGICAL ACTIVITY:

L6H21, a Chalcone (HY-121054) derivative, is an orally active, potent and specific **myeloid differentiation 2** (**MD-2**) inhibitor. L6H21 directly binds to MD-2 protein with a high affinity and low $\mathbf{K_D}$ value of 33.3 μM, blocking the formation of the LPS-TLR4/MD-2 complex. L6H21 inhibits LPS-induced expression of **TNF-α** and **IL-6** in RAW264.7 macrophages, with $\mathbf{IC_{50}}$ values of 6.58 and 8.59 μM, respectively. L6H21 can be used for alcoholic liver disease, metabolic disturbance and neuroinflammation research[1][2][3]. ***In Vitro:*** L6H21 (10 μM, 2 h) inhibits EtOH + LPS-induced **apoptosis** and mitochondrial damage in RAW264.7 cells[1].
L6H21 (10 μM, 2 h) attenuates EtOH + LPS-induced ROS formation and TLR4–NF-κB activation, and decreases NLRP3 inflammasome activation[1]. ***In Vivo:*** L6H21 (10 mg/kg, Oral gavage, daily) effectively inhibits EtOH + LPS-induced hepatic fat accumulation, hepatic steatosis and liver injury[1].
L6H21 (0-40 mg/kg, Orally, daily for 4 weeks) attenuates metabolic disturbance, restores cognition and attenuates brain pathologies dose and time-dependently in HFD-fed rats, and shows neuroprotective effect in a model of prediabetes[2].

PROTOCOL (Extracted from published papers and Only for reference)

Animal Administration: L6H21 is dissolved in 1% CMC-Na[2]

References:

[1]. Kong X, et al. Chalcone Derivative L6H21 Reduces EtOH + LPS-Induced Liver Injury Through Inhibition of NLRP3 Inflammasome Activation. Alcohol Clin Exp Res. 2019 Aug;43(8):1662-1671.

[2]. Oo TT, et al. L6H21 protects against cognitive impairment and brain pathologies via toll-like receptor 4-myeloid differentiation factor 2 signalling in prediabetic rats. Br J Pharmacol. 2022 Mar;179(6):1220-1236.

[3]. Yi Wang, et al. MD-2 as the target of a novel small molecule, L6H21, in the attenuation of LPS-induced inflammatory response and sepsis. Br J Pharmacol. 2015 Sep;172(17):4391-405.

CAIndexNames:

2-Propen-1-one, 3-(2,3-dimethoxyphenyl)-1-(4-methoxyphenyl)-, (2E)-

SMILES:

O=C(C1=CC=C(OC)C=C1)/C=C/C2=CC=CC(OC)=C2OC

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

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