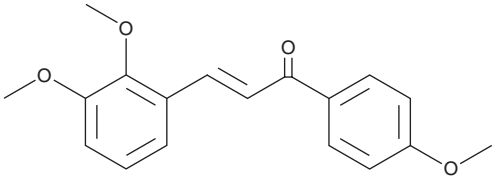
PRODUCT INFORMATION

L6H21

Item No. 35284

CAS Registry No.:	24533-47-9
Formal Name:	(2E)-3-(2,3-dimethoxyphenyl)-1-(4-methoxyphenyl)-2-propen-1-one
MF:	$C_{18}H_{18}O_4$
FW:	298.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 320 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

L6H21 is supplied as a solid. A stock solution may be made by dissolving the L6H21 in the solvent of choice, which should be purged with an inert gas. L6H21 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of L6H21 in these solvents is approximately 5 and 20 mg/ml, respectively.

L6H21 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, L6H21 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. L6H21 has a solubility of approximately 0.20 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

L6H21 is an inhibitor of myeloid differentiation 2 (MD-2), also known as lymphocyte antigen 96 (LY96).[1] It binds to MD-2 (K_d = 33.3 µM in a cell-free assay) and inhibits the protein-protein interaction between MD-2 and toll-like receptor 4 (TLR4) in LPS-stimulated ECV304 cells. L6H21 (10 µM) decreases the migration of LPS-stimulated HCT116 colon cancer cells.[2] It inhibits LPS-induced increases in the production of TNF-α and IL-6 in mouse primary macrophages (IC_{50}s = 6.17 and 7.72 µM, respectively), as well as increases survival in a mouse model of LPS-induced sepsis.[1] L6H21 (40 mg/kg) increases cardiac levels of glutathione peroxidase 4 (GPX4) and decreases cardiac mitochondrial reactive oxygen species (ROS) in rats fed a high-fat diet.[3]

References

1. Wang, Y., Shan, X., Chen, G., *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.* **172(17)**, 4391-4405 (2015).
2. Rajamanickam, V., Yan, T., Xu, S., *et al*. Selective targeting of the TLR4 co-receptor, MD2, prevents colon cancer growth and lung metastasis. *Int. J. Biol. Sci.* **16(8)**, 1288-1302 (2020).
3. Sumneang, N., Oo, T.T., Singhanat, K., *et al*. Inhibition of myeloid differentiation factor 2 attenuates cardiometabolic impairments via reducing cardiac mitochondrial dysfunction, inflammation, apoptosis and ferroptosis in prediabetic rats. *Biochem. Biophys. Acta Mol. Basis Dis* **1868(2)**, 166301 (2021).

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