Product data sheet



MedKoo Cat#: 564775				
Name: L48H37				
CAS: 343307-76-6				
Chemical Formula: C ₂₇ H ₃₃ NO ₇				
Exact Mass: 483.2257				
Molecular Weight: 483.561				
Product supplied as:	Powder			
Purity (by HPLC):	$\geq 98\%$			
Shipping conditions	Ambient temperature			
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.			
-	In solvent: -80°C 3 months; -20°C 2 weeks.			



1. Product description:

L48H37 is a specific myeloid differentiation 2 (MD2) inhibitor.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	50.0	103.40

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.07 mL	10.34 mL	20.68 mL
5 mM	0.41 mL	2.07 mL	4.14 mL
10 mM	0.21 mL	1.03 mL	2.07 mL
50 mM	0.04 mL	0.21 mL	0.41 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

1. Lu KH, Wu HH, Lin RC, Lin YC, Lu PW, Yang SF, Yang JS. Curcumin Analogue L48H37 Suppresses Human Osteosarcoma U2OS and MG-63 Cells' Migration and Invasion in Culture by Inhibition of uPA via the JAK/STAT Signaling Pathway. Molecules. 2020 Dec 23;26(1):30. doi: 10.3390/molecules26010030. PMID: 33374783; PMCID: PMC7795127.

2. Feng C, Xia Y, Zou P, Shen M, Hu J, Ying S, Pan J, Liu Z, Dai X, Zhuge W, Liang G, Ruan Y. 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. doi: 10.1002/mc.22633. Epub 2017 Mar 10. PMID: 28218464.

In vivo study

1. Li SS, Jiang WL, Xiao WQ, Li K, Zhang YF, Guo XY, Dai YQ, Zhao QY, Jiang MJ, Lu ZJ, Wan R. KMT2D deficiency enhances the anti-cancer activity of L48H37 in pancreatic ductal adenocarcinoma. World J Gastrointest Oncol. 2019 Aug 15;11(8):599-621. doi: 10.4251/wjgo.v11.i8.599. PMID: 31435462; PMCID: PMC6700028.

2. Feng C, Xia Y, Zou P, Shen M, Hu J, Ying S, Pan J, Liu Z, Dai X, Zhuge W, Liang G, Ruan Y. 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. doi: 10.1002/mc.22633. Epub 2017 Mar 10. PMID: 28218464.

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7. Bioactivity

Biological target:

L48H37 is a potent and specific myeloid differentiation protein 2 (MD2) inhibitor and inhibits the interaction and signaling transduction of LPS-TLR4/MD2.

In vitro activity

L48H37 up to 5 μ M inhibited, without cytotoxicity, the motility, migration, and invasion of human osteosarcoma U2OS and MG-63 cells. Collectively, L48H37 represses the invasion and migration capabilities of U2OS and MG-63 cells by the suppression of uPA expression and the inhibition of JAK/STAT signaling. These results suggest that L48H37 may be a potential candidate for antimetastatic treatment of human osteosarcoma.

Reference: Molecules. 2020 Dec 23;26(1):30. https://pubmed.ncbi.nlm.nih.gov/33374783/

In vivo activity

Administering L48H37 to mice bearing tumors derived from control or KMT2D-knockdown PDAC cells significantly decreased the tumor burden.

Reference: World J Gastrointest Oncol. 2019 Aug 15;11(8):599-621. https://pubmed.ncbi.nlm.nih.gov/31435462/

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.