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Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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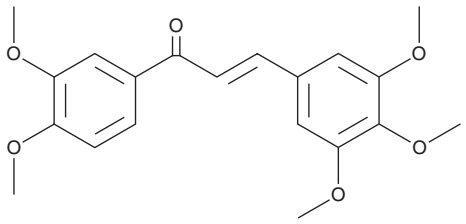
PRODUCT INFORMATION

MD2-IN-1

Item No. 38323

CAS Registry No.:	111797-22-9
Formal Name:	1-(3,4-dimethoxyphenyl)-3-(3,4,5-trimethoxyphenyl)-2-propen-1-one
Synonym:	Myeloid Differentiation 2 Inhibitor 1
MF:	$C_{20}H_{22}O_6$
FW:	358.4
Purity:	≥98%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

MD2-IN-1 is supplied as a solid. A stock solution may be made by dissolving the MD2-IN-1 in the solvent of choice, which should be purged with an inert gas. MD2-IN-1 is soluble in the organic solvent DMSO.

Description

MD2-IN-1 is a chalcone derivative and an inhibitor of the interaction between myeloid differentiation 2 (MD-2) and LPS.[1] It inhibits the interaction between MD-2 and LPS in a cell-free assay when used at a concentration of 0.1 µM. It inhibits LPS-induced increases in the levels of TNF-α and IL-6 secreted from isolated and washed mouse peritoneal macrophages (MPMs; IC_{50}s = 4.27 and 2.09 µM, respectively). MD2-IN-1 (5 and 20 µM) inhibits LPS-induced Nf-κB DNA binding in MPMs. It inhibits the growth of HepG2 hepatocellular, A549 lung, HT-29 colon, HeLa cervical, MDA-MB-231 breast, and A2780 ovarian cancer cells (GI_{50}s= 0.19, 0.16, 0.062, 0.019, 0.065, and 0.32 µM, respectively).[2] MD2-IN-1 (10 mg/kg) reduces tumor volume and weight in a HeLa mouse xenograft model. *In vivo*, MD2-IN-1 (20 mg/kg per day) prevents LPS-induced increases in bronchoalveolar lavage fluid (BALF) total protein levels and $CD68^+$ macrophage and neutrophil infiltration in a mouse model of LPS-induced acute lung injury.[1] It also reduces myeloperoxidase (MPO) activity in isolated neutrophils in the same model.

References

1. Zhang, Y., Wu, J., Ying, S., *et al.* Discovery of new MD2 inhibitor from chalcone derivatives with anti-inflammatory effects in LPS-induced acute lung injury. *Sci. Rep.* **6**, 25130 (2016).
2. Zhang, Y.-L., Li, B.-Y., Yang, R., *et al.* A class of novel tubulin polymerization inhibitors exert effective anti-tumor activity *via* mitotic catastrophe. *Eur. J. Med. Chem.* **163**, 896-910 (2019).

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