产品名称：ML130 (Nodinitib-1)
产品别名：ML130; CID-1088438；Nodinitib-1

生物活性：

Description	Nodinitib-1 (ML130;CID-1088438) is a NOD1 inhibitor with an IC_{50} of 0.56 μM.
IC_{50} & Target	IC50: 0.56 μM (NOD1)[1]
In Vitro	Nodinitib-1 selectively inhibits IL-8 production induced by NOD1 ligand. Nodinitib-1 also inhibits γ-tri-DAP-induced expression of the prototypical NF-κB target gene IκBα at the mRNA level. Nodinitib-1 inhibits γ-tri-DAP-dependent activation of NF-κB (IκBα phosphorylation and degradation) and MAPK (p38 phosphorylation) signalings, without affecting Akt survival pathway. Nodinitib-1 selectively inhibits responses of primary dendritic cells to NOD1 ligand. Nodinitib-1 reduces cell surface expression of co-stimulatory molecules CD83, CD86 and HLA-DR and also inhibits expression of IL-1β, IL-6 and TNFα elicited by γ-tri-DAP (but not by LPS), without causing cytoxicity[1]. Nodinitib-1 is identified as NOD1-selective molecules from an HTS campaign involving ~290,000 compounds. Nodinitib-1 inhibits γ-tri-DAP-stimulated luciferase production in HEK 293T cells, which has endogenous NOD1 levels at submicromolar concentration as determined in a NF-κB-linked reporter assay[2].
Solvent&Solubility	***In Vitro:*** **DMSO : 20 mg/mL (69.60 mM;** Need ultrasonic and warming)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.4802 mL	17.4010 mL	34.8020 mL
	5 mM	0.6960 mL	3.4802 mL	6.9604 mL
	10 mM	0.3480 mL	1.7401 mL	3.4802 mL

*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液；一旦配成溶液，请分装保存，避免反复冻融造成的产品失效。

储备液的保存方式和期限：-80°C, 6 months; -20°C, 1 month。-80°C 储存时，请在 6 个月内使用，-20°C 储存时，请在 1 个月内使用。

In Vivo:

请根据您的实验动物和给药方式选择适当的溶解方案。以下溶解方案都请先按照 **In Vitro** 方式配制澄清的储备液，再依次添加助溶剂：

——为保证实验结果的可靠性，澄清的储备液可以根据储存条件，适当保存；体内实验的工作液，建议您现用现配，当天使用； 以下溶剂前显示的百分比是指该溶剂在您配制终溶液中的体积占比；如在配制过程中出现沉淀、析出现象，可以通过加热和/或超声的方式助溶

1.请依序添加每种溶剂： 10% DMSO →90% corn oil

Solubility: ≥ 2.5 mg/mL (8.70 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (8.70 mM，饱和度未知) 的澄清溶液，此方案不适用于实验周期在半个月以上的实验。

以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μL 玉米油中，混合均匀。

References	[1]. Correa RG, et al. Discovery and characterization of 2-aminobenzimidazole derivatives as selective NOD1 inhibitors. Chem Biol. 2011 Jul 29;18(7):825-32. [2]. Hershberger PM, et al. Synthesis and physicochemical characterization of novel phenotypic probes targeting the nuclear factor-kappa B signaling pathway. Beilstein J Org Chem. 2013 May 8;9:900-7.

实验参考：	
Cell Assay	RAW264.7 cells are treated with 5 μM of CID-1088438 or CID-44229067 alone, or also infected with S. typhimurium at multiplicity of infection (MOI) of 20 and 200 bacteria per mammalian cell. Cell viability is analyzed two hours after Salmonella infection by measuring ATP levels. Percentage viability is calculated according to the ATP levels of respective non-infected cells. Values presented are averages of two replicates (+ SEM)[1].
References	[1]. Correa RG, et al. Discovery and characterization of 2-aminobenzimidazole derivatives as selective NOD1 inhibitors. Chem Biol. 2011 Jul 29;18(7):825-32. [2]. Hershberger PM, et al. Synthesis and physicochemical characterization of novel phenotypic probes targeting the nuclear factor-kappa B signaling pathway. Beilstein J Org Chem. 2013 May 8;9:900-7.