

C29

## Chemical Properties

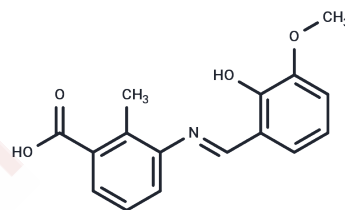
CAS No. : 363600-92-4

Formula: C<sub>16</sub>H<sub>15</sub>NO<sub>4</sub>

Molecular Weight: 285.29

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



## Biological Description

Description	C29 is a novel inhibitor of TLR2/1 and TLR2/6 signaling induced by synthetic and bacterial TLR2 agonists in human HEK-TLR2 and THP-1 cells, but only TLR2/1 signaling in murine macrophages.
Targets(IC50)	TLR
In vitro	C29 blunts hTLR2/1 and hTLR2/6 signaling in HEK-TLR2 Stable transfectants and THP-1 Cells. C29 blocks P3C- and P2C-induced IL-8 mRNA dose-dependently in HEK-TLR2 stable transfectants. C29 also inhibits P3C- and P2C-induced IL-1 $\beta$ gene expression significantly at both 1 h and 4 h following stimulation, as well as both P3C- and P2C-induced NF- $\kappa$ B-luciferase activity in transiently transfected HEK293T cells expressing hTLR2 and an NF- $\kappa$ B-sensitive luciferase reporter construct. C29 preferentially inhibits TLR2/1 signaling in primary murine macrophages. C29 blocks TLR2 bacterial agonist-induced proinflammatory gene expression in HEK-TLR2 Cells and murine macrophages. C29 inhibits ligand-induced interaction of TLR2 with MyD88 and blocks MAPK and NF- $\kappa$ B activation[1].
In vivo	C29L inhibits TLR2/1-induced inflammation in mice. Mice treated twice with C29L before administration of P3C significantly blocks IL-12 p40 and TNF- $\alpha$ liver cytokine mRNA and serum protein. C29L has a significant inhibitory effect at the later time point for IL-12 p40 [1].

## Solubility Information

Solubility	H <sub>2</sub> O: Insoluble DMSO: 60 mg/mL (210.31 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.5052 mL	17.526 mL	35.0521 mL
5 mM	0.701 mL	3.5052 mL	7.0104 mL
10 mM	0.3505 mL	1.7526 mL	3.5052 mL
50 mM	0.0701 mL	0.3505 mL	0.701 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

## Reference

- Mistry P, et al. Inhibition of TLR2 signaling by small molecule inhibitors targeting a pocket within the TLR2 TIR domain. *Proc Natl Acad Sci U S A*. 2015 Apr 28;112(17):5455-60.
- Jiang S, Yin H, Qi X, et al. Immunomodulatory effects of fucosylated chondroitin sulfate from *Stichopus chloronotus* on RAW 264.7 cells. *Carbohydrate Polymer*. 2020, 251: 117088.
- Nie K, Zhang C, Deng M, et al. A Series of Genes for Predicting Responses to Anti-Tumor Necrosis Factor  $\alpha$  Therapy in Crohn's Disease. *Frontiers in Pharmacology*. 2022: 1195
- Du J, Li J, Zhu J, et al. Structural characterization and immunomodulatory activity of a novel polysaccharide from *Ficus carica*[J]. *Food & function*. 2018 Jul 17;9(7):3930-3943.
- Wen Y, Peng D, Li C, et al. A new polysaccharide isolated from *Morchella importuna* fruiting bodies and its immunoregulatory mechanism[J]. *International Journal of Biological Macromolecules*. 2019, 137: 8-19.
- Li Y, Niu M, Zhao A, et al. CXCL12 is involved in  $\alpha$ -synuclein-triggered neuroinflammation of Parkinson's disease. *Journal of Neuroinflammation*. 2019, 16(1): 1-14
- Li Y, Niu M, Zhao A, et al. CXCL12 is involved in  $\alpha$ -synuclein-triggered neuroinflammation of Parkinson's disease[J]. *Journal of Neuroinflammation*. 2019, 16(1): 1-14.
- Wen Y, Peng D, Li C, et al. A new polysaccharide isolated from *Morchella importuna* fruiting bodies and its immunoregulatory mechanism. *International Journal of Biological Macromolecules*. 2019, 137: 8-19.
- Jiang S, Yin H, Qi X, et al. Immunomodulatory effects of fucosylated chondroitin sulfate from *Stichopus chloronotus* on RAW 264.7 cells[J]. *Carbohydrate Polymer*. 2020, 251: 117088.
- Du J, Li J, Zhu J, et al. Structural characterization and immunomodulatory activity of a novel polysaccharide from *Ficus carica*. *Food & function*. 2018 Jul 17;9(7):3930-3943.
- Zhang R, Tang L, Wang Y, et al. A Dendrimer Peptide (KK2DP7) Delivery System with Dual Functions of Lymph Node Targeting and Immune Adjuvants as a General Strategy for Cancer Immunotherapy. *Advanced Science*. 2023: 2300116.

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