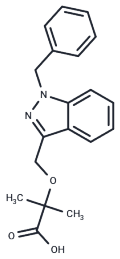
Data Sheet (Cat.No.T6413)

TargetMol

Bindarit

Chemical Properties



CAS No. : 130641-38-2

Formula: C19H20N2O3

Molecular Weight: 324.37

Appearance: no data available

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

Biological Description

Description	Bindarit is a selective inhibitor of monocyte chemoattractant proteins MCP-1/CCL2, MCP-3/CCL7 and MCP-2/CCL8 with anti-inflammatory effects. Bindarit specifically inhibits p65- and p65/p50-induced MCP-1 promoter activation and has no effect on other tested activated promoters.
Targets(IC50)	CCR
In vitro	**METHODS**: Raw 264.7 cells were stimulated with LPS (1 μg/ml) at different time points (1, 2, 4, 8, and 24 h) with bindarit (AF2838) (300 μM, 1 h before treatment) to investigate the mechanism by which bindarit exerts its anti-inflammatory effects. **RESULTS** Bindarit pretreatment significantly reduced MCP-1 mRNA levels, and at the highest LPS-induced peak (4 h), MCP-2 and MCP-3 gene expressions were inhibited by 24% and 36%, respectively. [1]
In vivo	**METHODS**: Bindarit (AF2838) (200 μg/g) was used to treat the OVX mouse model to verify the expression of CCL2 and CCL7. **RESULTS** Bindarit attenuated the expression of CCL2 and CCL7 in the OVX mouse model. [2]

Solubility Information

Solubility	Ethanol: 25 mg/mL (77.07 mM),Sonication is recommended. DMSO: 45 mg/mL (138.73 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.0829 mL	15.4145 mL	30.829 mL
5 mM	0.6166 mL	3.0829 mL	6.1658 mL
10 mM	0.3083 mL	1.5414 mL	3.0829 mL
50 mM	0.0617 mL	0.3083 mL	0.6166 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

Mora E,et al. Bindarit: an anti-inflammatory small molecule that modulates the NFκB pathway. Cell Cycle. 2012 Jan 1;11(1):159-69.
Wu R, Zhang P A, Liu X, et al. Decreased miR-325-5p Contributes to Visceral Hypersensitivity Through Post-transcriptional Upregulation of CCL2 in Rat Dorsal Root Ganglia. Neuroscience Bulletin. 2019 Apr 12: 1-11
Shi Z, Yu P, Lin W J, et al.Microglia drive transient insult-induced brain injury by chemotactic recruitment of CD8+ T lymphocytes.Neuron.2023
Yuan SG, et al. Bindarit Reduces Bone Loss in Ovariectomized Mice by Inhibiting CCL2 and CCL7 Expression via the NF-κB Signaling Pathway. Orthop Surg. 2022 Jun;14(6):1203-1216.
Grassia G,et al. The anti-inflammatory agent bindarit inhibits neointima formation in both rats and hyperlipidaemic mice. Cardiovasc Res. 2009 Dec 1;84(3):485-93.
Gazzaniga S, et al. J Invest Dermatol, 2007, 127(8), 2031-2041.
Grassia G, et al. Cardiovasc Res, 2009, 84(3), 485-493.
Wu R, Zhang P A, Liu X, et al. Decreased miR-325-5p Contributes to Visceral Hypersensitivity Through Post-transcriptional Upregulation of CCL2 in Rat Dorsal Root Ganglia[J]. Neuroscience bulletin. 2019 Apr 12: 1-11.