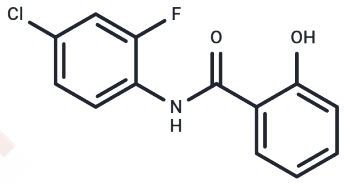
Data Sheet (Cat.No.T8550)

TargetMol

NDMC101

Chemical Properties



CAS No. : 1308631-40-4

Formula: C13H9ClFNO2

Molecular Weight: 265.67

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	NDMC101 is an inhibitor of dipeptidyl peptidase-IV activity in human T cells and exhibits immunomodulatory effects. It also acts as a novel inhibitor of NFATc1 and NF-κB activity.
Targets(IC50)	NF-κB,Proteasome
In vitro	NDMC101 markedly inhibited RANKL-induced formation of TRAP+ multinucleated cells in RAW264.7 and bone marrow macrophage cells (BMMs).?Moreover, pit formation assay showed that NDMC101 significantly reduced the bone-resorbing activity of mature osteoclasts[1].
In vivo	In CIA mice, oral administration of NDMC101 reduced arthritic index and mitigated bone erosion.?Serum TNF-α and IL-1β concentrations in these mice were decreased significantly at the higher dose of 62.5 mg/kg[1].
Cell Research	Differentiation into osteoclast-like cells was examined by tartrate-resistant acid phosphatase (TRAP) staining and expression of osteoclast differentiation markers[1].
Animal Research	Collagen-induced arthritis (CIA) mice were administered test articles by gavages to assess its efficacy.?Then clinical, histological, and biochemical parameters were assessed to determine the effects of N-(4-chloro-2-fluorophenyl)-2-hydroxybenzamide (NDMC101) on synovial inflammation and bone erosion by hematoxlin and eosin staining and Enzyme-linked immunosorbent assay (ELISA)[1].

Solubility Information

Solubility	DMSO: 11 mg/mL (41.4 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (7.53 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.7641 mL	18.8203 mL	37.6407 mL
5 mM	0.7528 mL	3.7641 mL	7.5281 mL
10 mM	0.3764 mL	1.882 mL	3.7641 mL
50 mM	0.0753 mL	0.3764 mL	0.7528 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Cheng C P , Huang H S , Hsu Y C , et al. A benzamide-linked small molecule NDMC101 inhibits NFATc1 and NF-κB activity: a potential osteoclastogenesis inhibitor for experimental arthritis.[J]. Journal of Clinical Immunology, 2012, 32(4):762-777.

Jun-Ting Liou, et al. A salicylate-based small molecule HS-Cm exhibits immunomodulatory effects and inhibits dipeptidyl peptidase-IV activity in human T cells. Eur J Pharmacol. 2014 Mar 5;726:124-32.