

ONC212

Chemical Properties

CAS No. : 1807861-48-8

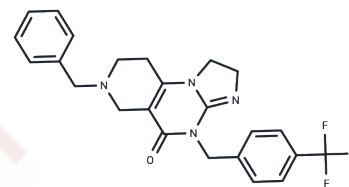
Formula: C₂₄H₂₃F₃N₄O

Molecular Weight: 440.46

Store at low temperature

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	ONC212 [a fluorinated-ONC201 analogue] is a selective GPR132 agonist.
Targets(IC50)	Apoptosis,GPCR
In vitro	In vitro studies using human acute myeloid leukemia (AML) cell lines, primary AML, and normal bone marrow (BM) samples demonstrate that ONC212 exerts prominent apoptogenic effects in AML, but not in normal BM cells, suggesting potential clinical utility[1].
In vivo	ONC212 is active in pancreatic cancer as single agent or in combination with 5-fluorouracil, irinotecan, oxaliplatin or RTK inhibitor crizotinib. Based on upregulation of pro-survival IGF1-R in some tumors, Founded an active combination of ONC212 with inhibitor AG1024, including in vivo[2].

Solubility Information

Solubility	DMSO: 50 mg/mL (113.52 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 (4.54 mM),Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2704 mL	11.3518 mL	22.7035 mL
5 mM	0.4541 mL	2.2704 mL	4.5407 mL
10 mM	0.227 mL	1.1352 mL	2.2704 mL
50 mM	0.0454 mL	0.227 mL	0.4541 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

- Nii T, Prabhu VV, Ruvolo V, et al. Imipridone ONC212 activates orphan G protein-coupled receptor GPR132 and integrated stress response in acute myeloid leukemia[J]. *Leukemia*. 2019 Dec;33(12):2805-2816.
- Wei B, Zhang T, Wang P, et al. Anti-infective therapy using species-specific activators of *Staphylococcus aureus* ClpP. *Nature Communications*. 2022, 13(1): 1-16.
- Lev A, Lulla A R, Wagner J, et al. Anti-pancreatic cancer activity of ONC212 involves the unfolded protein response (UPR) and is reduced by IGF1-R and GRP78/BIP.[J]. *Oncotarget*, 2017, 8(47):81776-81793.
- Zhang T, Wang P, Zhou H, et al. Structure-guided development of selective caseinolytic protease P agonists as antistaphylococcal agents. *Cell Reports Medicine*. 2024
- Zhang T, Wu W, Zhao Y, et al. Structure-Guided Development of ClpP Agonists with Potent Therapeutic Activities against *Staphylococcus aureus* Infection. *Journal of Medicinal Chemistry*. 2025

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