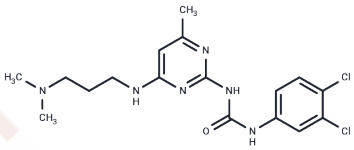
Data Sheet (Cat.No.T70007)

TargetMol

CT-179

Chemical Properties



CAS No. : 1996636-69-1

Formula: C17H22Cl2N6O

Molecular Weight: 397.3

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	CT-179 is a potent and selective inhibitor of oligodendrocyte transcription factor 2 (OLIG2), reduces tumor cell proliferation and induces apoptosis, and enhances efficacy when used in combination with radiotherapy and other agents, showing potential in the treatment of medulloblastoma and glioblastoma.
Targets(IC50)	OLIG2
In vitro	**Methods**: Daoy, UW228, and Med-813 MB cells were treated with CT-179 (0.01-10 μM, 7 days), and cell viability was determined by MTT assay. **Results**: CT-179 showed activity in all three cell lines, with IC50 values of 143.6 nM, 285.4 nM, and 985.2 nM, respectively. [1]
In vivo	**Methods**: CT-179 (50 mg/kg, ip, twice weekly for 2 weeks) was combined with RT (8 Gy, 2 Gy fractions) to treat immunocompromised NOD rag γ (NRG) mice implanted with orthotopic Daoy-luci (SHH-MB) to investigate whether it exhibits similar antitumor activity against human MB in vivo. **Results**: Animals treated with CT-179 + RT had significantly slower progression and significantly delayed tumor growth in the brain and spinal cord; CT-179 combined with RT significantly prolonged EFS. [1]

Solubility Information

Solubility	DMSO: 5.19 mg/mL (13.06 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 0.52 mg/mL (1.31 mM),Solution. *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	2.517 mL	12.5849 mL	25.1699 mL
5 mM	0.5034 mL	2.517 mL	5.034 mL
10 mM	0.2517 mL	1.2585 mL	2.517 mL
50 mM	0.0503 mL	0.2517 mL	0.5034 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

Li Y, Lim C, Dismuke T, Malawsky DS, Oasa S, Bruce ZC, Offenhäuser C, Baumgartner U, D'Souza RCJ, Edwards SL, French JD, Ock LSH, Nair S, Sivakumaran H, Harris L, Tikunov AP, Hwang D, Del Mar Alicea Pauneto C, Maybury M, Hassall T, Wainwright B, Kesari S, Stein G, Piper M, Johns TG, Sokolsky-Papkov M, Terenius L, Vukojević V, Gershon TR, Day BW. Preventing recurrence in Sonic Hedgehog Subgroup Medulloblastoma using the OLIG2 inhibitor CT-179. Res Sq [Preprint]. 2023 Jun 9:rs.3.rs-2949436.

Xu Z, et al. OLIG2 Is a Determinant for the Relapse of MYC-Amplified Medulloblastoma. Clin Cancer Res. 2022 Oct 3; 28(19):4278-4291.

Desai K, et aL. OLIG2 mediates a rare targetable stem cell fate transition in sonic hedgehog medulloblastoma. Nat Commun. 2025 Feb 4;16(1):1092.