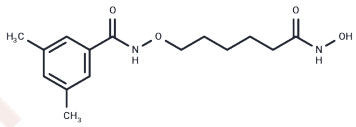
Data Sheet (Cat.No.T6061)

TargetMol

LMK-235

Chemical Properties



CAS No. : 1418033-25-6

Formula: C15H22N2O4

Molecular Weight: 294.35

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	LMK-235 is a potent HDAC inhibitor, and is used in cancer research.
Targets(IC50)	HDAC
In vivo	LMK-235 demonstrates significant cytotoxicity against the breast cancer cell line MDA-MB-231, the oral cancer cell line Cal27, and the esophageal cancer cell line Kyse510, notably enhancing the cytotoxic effect of cisplatin. Additionally, LMK-235 exhibits nanomolar-level activity across various life-cycle stages of Plasmodium species. It induces histone deacetylase (HDAC) inhibition in human cancer cell lines with varying sensitivity to cisplatin compounds, achieving an IC50 of less than 1 μM.
Kinase Assay	HDAC IC50 Profiling: The in vitro inhibitory activity of compounds against seven human HDAC isoforms (1, 2, 4 C2A, 5 C2A, 6, 8, and 11) are performed with a fluorescent based assay according to the company's standard operating procedure. The IC50 values are determined using 10 different concentrations with 3-fold serial dilution starting at 10 μM. TSA and vorinostat are used as reference compounds.
Cell Research	The rate of cell survival under the action of test substances is evaluated by an improved MTT assay. The assay is based on the ability of viable cells to metabolize yellow MTT to violet formazan that can be detected spectrophotometrically. In brief, A2780, Cal27, Kyse510, and MDA-MB-231 cell lines are seeded at a density of 5000, 7000, 8000, and 10 000 cells/well in 96-well plates. After 24 h, cells are exposed to increased concentrations of the test compounds. Incubation is ended after 72 h, and cell survival is determined by addition of MTT solution (5 mg/mL in phosphate buffered saline). The formazan precipitate is dissolved in DMSO. Absorbance s measured at 544 and 690 nm in a FLUOstar microplate reader. (Only for Reference)

Solubility Information

Solubility	DMSO: 50 mg/mL (169.87 mM),Sonication is recommended. Ethanol: 29.4 mg/mL (99.88 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	2% DMSO+40% PEG300+5% Tween-80+53% Saline: 1 mg/mL (3.4 mM) *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*

In vivo Formulation	*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	3.3973 mL	16.9866 mL	33.9732 mL
5 mM	0.6795 mL	3.3973 mL	6.7946 mL
10 mM	0.3397 mL	1.6987 mL	3.3973 mL
50 mM	0.0679 mL	0.3397 mL	0.6795 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

Marek L, et al. J Med Chem. 2013, 56(2), 427-436.
Hansen FK, et al. Eur J Med Chem. 2014, 82, 204-213.