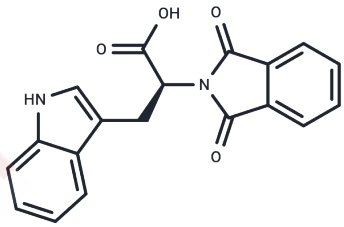
Data Sheet (Cat.No.T2038)

TargetMol

RG108

Chemical Properties



CAS No. : 48208-26-0

Formula: C19H14N2O4

Molecular Weight: 334.33

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	RG108 (N-Phthalyl-L-tryptophan) is a DNA methyltransferase inhibitor with an IC50 of 115 nM.
Targets(IC50)	DNA Methyltransferase
In vivo	In iPS cells derived from SM, RG108 significantly reduces DNA activity. In tumor cells, RG108 inhibits gene demethylation and reactivation without affecting the methylation of telomeric gene sequences.
Kinase Assay	In vitro methylation assay: The substrate DNA for the in vitro methylation assay is a 798 bp fragment (?423/+375 relative to the initiation codon) from the promoter region of the human p16Ink4a gene. The methylation reaction contains 350 to 400 ng substrate DNA and 4 units of M.SssI methylase (0.5 μM) in a final volume of 50 μL. Inhibitors are added to final concentrations of 10, 100, 200, and 500 μM, respectively. Reactions are done at 37 °C for 2 hours. After completion, the reaction is inactivated at 65 °C for 15 minutes and the DNA is purified using PCR Purification kit. Three hundred nanograms of purified DNA is digested for 3 hours at 60 °C with 30 units of BstUI and analyzed on 2% Tris-borate EDTA agarose gels.
Cell Research	For the determination of cellular growth and viability, cells are stained with trypan blue and counted using a standard counting grid.(Only for Reference)

Solubility Information

Solubility	Ethanol: 33.4 mg/mL (99.9 mM),Sonication is recommended. DMSO: 255 mg/mL (762.72 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 (5.98 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	2.9911 mL	14.9553 mL	29.9106 mL
5 mM	0.5982 mL	2.9911 mL	5.9821 mL
10 mM	0.2991 mL	1.4955 mL	2.9911 mL
50 mM	0.0598 mL	0.2991 mL	0.5982 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

Brueckner B, et al, Cancer Res, 2005, 65(14), 6305-6311.
Zhang R, Chen Y, Feng Z, et al.Reprogramming Human Urine Cells into Intestinal Organoids with Long-Term Expansion Ability and Barrier Function.Heliyon.2024
Kong F, Liu H, Xu T, et al.RG108 attenuates acute kidney injury by inhibiting P38 MAPK/FOS and JNK/JUN pathways. International Immunopharmacology.2024, 142: 113077.
Schirrmacher E, et al, Bioconjug Chem, 2006, 17(2), 261-266.
Pasha Z, et al, PLoS One, 2011, 6(8), e23667.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481