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Produktinformation

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- Diagnostik & molekulare Diagnostik
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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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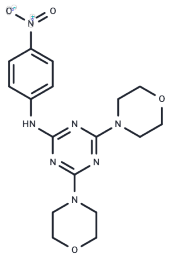
Data Sheet (Cat.No.T1908)

TargetMol

MHY1485

Chemical Properties



CAS No. : 326914-06-1

Formula: C17H21N7O4

Molecular Weight: 387.39

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	MHY1485 is a mTOR activator. It inhibits the autophagic process by inhibition of fusion between autophagosomes and lysosomes, leading to the accumulation of LC3II protein and enlarged autophagosomes.
Targets(IC50)	mTOR,Autophagy
In vivo	MHY1485 elevates the phosphorylation levels of mTOR and its downstream targets, S6K1 and rpS6 proteins, without affecting the total content of mTOR, S6K1, and rpS6. Short-term treatment with MHY1485 before xenotransplantation of ovaries can promote the growth of secondary hair follicles. Additionally, post-treatment transplantation with MHY1485 facilitates the generation of mature oocytes and the production of healthy offspring. MHY1485 induces the accumulation of LC3II and the expansion of autophagosomes in a dose- and time-dependent manner.
Kinase Assay	Ovaries from mice at day10 of age are treated with 10 μM MHY1485 for 3h and proteins are extracted using M-PER Mammalian Protein Extraction Reagent containing a protease inhibitor cocktail. Protein concentrations in supernatants are determined by the bicinchoninic acid method. Equal amounts of protein lysates are loaded on 4-12% NuPAGE Bis-Tris gels in MOPS buffer and transferred to 0.45 μM pore nitrocellulose membranes[2].
Cell Research	MHY1485 is dissolved in DMSO and then diluted with appropriate media[3]. MC3T3-E1 cells are maintained in Dulbecco's modified Eagle's medium (DMEM) supplemented with 10% fetal bovine serum (FBS), 100 U/mL penicillin and 100 mg/mL streptomycin at 37°C in a humidified atmosphere of 5% CO2. Having reached 70% confluence, the culture medium is switched to commercial osteogenic differentiation medium. MC3T3-E1 cells are cultured in the osteogenic differentiation medium for 14 days, following by culture in DMEM supplemented with varying concentrations of liraglutide (catalog no. HY-P0014; MedChem Express) for a further 14 days. MC3T3-E1 cells treated with 4 nM liraglutide are cultured in the presence or absence of Compound C or MHY1485. MC3T3-E1 cells maintained in DMEM for 28 days in the absence of any treatment are used as the negative control (NC); cells cultured in commercial osteogenic differentiation medium for 14 days and in DMEM without liraglutide for an additional 14 days are used as the positive control (PC)[3].

Solubility Information

Solubility	H2O: < 1 mg/mL (insoluble or slightly soluble), Ethanol: < 1 mg/mL (insoluble or slightly soluble), DMSO: 3.87 mg/mL (10 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5814 mL	12.9069 mL	25.8138 mL
5 mM	0.5163 mL	2.5814 mL	5.1628 mL
10 mM	0.2581 mL	1.2907 mL	2.5814 mL
50 mM	0.0516 mL	0.2581 mL	0.5163 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.

Reference

Hu J, Ling Z, Li W, et al.Glutamine promotes the proliferation of epithelial cells via mTOR/S6 pathway in oral lichen planus.Journal of Oral Pathology & Medicine.2022
Choi YJ, et al. PLoS One. 2012, 7(8), e43418.
Yang Z,