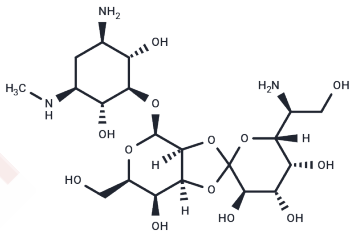
Data Sheet (Cat.No.T1022)

TargetMol

Hygromycin B

Chemical Properties



CAS No. : 31282-04-9

Formula: C20H37N3O13

Molecular Weight: 527.52

Storage: Keep away from moisture
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	Hygromycin B (Hygrovetine) is an aminoglycoside antibiotic that inhibits protein synthesis in both prokaryotic and eukaryotic cells by interfering with translocation and causing mistranslation by the 70S ribosome. It is commonly used for the selection of cells transfected with the hph or hyg resistance gene.
Targets(IC50)	ribosome,Antibacterial,Antibiotic,Antifungal
In vitro	**METHODS**: Mouse PDAC cells 14387T were transfected with lentiCRISPRv2 hygro lentivirus, and after 48 h, the transfected cells were cultured in new medium containing Hygromycin B (500 μg/mL) for two weeks, and the successful transfected cells were screened. **RESULTS**: Hygromycin B screened the lentivirally successfully transfected cells. [1] **METHODS**: E. coli was cultured in medium containing Hygromycin B (0-8 μg/mL) and cell growth was monitored using a Klett-Summerson colorimeter. **RESULTS**: Hygromycin B reduced the number of viable cells and increased doubling time in a concentration-dependent manner.Hygromycin B inhibited the number of viable cells by 50% at a concentration of 20 μg/mL, and halved the rate of growth at a concentration of 25 μg/mL. [2]
In vivo	**METHODS**: To assay antiviral activity in vivo, Hygromycin B (0-5 μmoL/kg) was administered intraperitoneally to MHV-A59-infected BALB/c mice twice daily for three days. **RESULTS**: Hygromycin B was able to reduce the levels of viral replication and necrotic liver foci in vivo. [3]

Solubility Information

Solubility	DMSO: 240 mg/mL (454.96 mM),Sonication is recommended. H2O: 125 mg/mL (236.96 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	5% DMSO+95% Saline: 1.58 mg/mL (3 mM),Solution. Saline: 50 mg/mL (94.78 mM),Solution. 10% DMSO+90% Saline: 3 mg/mL (5.69 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*

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	1.8957 mL	9.4783 mL	18.9566 mL
5 mM	0.3791 mL	1.8957 mL	3.7913 mL
10 mM	0.1896 mL	0.9478 mL	1.8957 mL
50 mM	0.0379 mL	0.1896 mL	0.3791 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

Fan M, et al. UDP-glucose dehydrogenase supports autophagy-deficient PDAC growth via increasing hyaluronic acid biosynthesis. Cell Rep. 2024 Feb 16;43(2):113808.
Fan M, Huo S, Guo Y, et al.UDP-glucose dehydrogenase supports autophagy-deficient PDAC growth via increasing hyaluronic acid biosynthesis.Cell Reports.2024, 43(2): 113808.
Yang W, Zhang M, Zhang T X, et al.YAP/TAZ mediates resistance to KRAS inhibitors through inhibiting proapoptosis and activating the SLC7A5/mTOR axis.JCI insight.2024, 9(24).
McGaha SM, et al. Hygromycin B inhibition of protein synthesis and ribosome biogenesis in Escherichia coli. Antimicrob Agents Chemother. 2007 Feb;51(2):591-6.
Macintyre G, et al. Hygromycin B therapy of a murine coronaviral hepatitis. Antimicrob Agents Chemother. 1991 Oct;35(10):2125-7.
Santerre RF, et al. Gene, 1984, 30(1-3), 147-156.
Hanif M, et al. Curr Genet, 2002, 41(3), 183-188.

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