=>SIGMA-ALDRICH

Rapamycin ready made solution from Streptomyces hygroscopicus, #R8781, store at -20C.

CAS RN 53123-88-9, aka sirolimus, rapamune. Formula: C51H79NO13. FW: 914.17.

This solution is 2.5mg/ml (2.74mM) in DMSO.

stock = (2.5g/Liter)/914.17 M = 2.734mM

final concentration: 0, 0.25ng/ml, 0.5ng/ml, 1.0 ng/ml, 2ng/ml

100x stock: 0, 25 ng/ml 50ng/ml 0.1mg/ml 0.2mg/ml

bioscreen max volume: 400uL, I use 200 uL

shake at 30C

=>DMSO is aliquoted in 10ml vials.

=> Powers 2006 G&D, rapamycin extends cls

The integral of the life span curve of drug vehicle-treated cells (2.93) increased to 4.23 at 300 pg/mL rapamycin and to 4.51 at 1 ng/mL rapamycin.

=> Xie 2005, PNAS, TOR chemical screen

Insights into TOR function and rapamycin response: Chemical genomic profiling by using a high-density cell array method

**Chemical Genomic Screening and Quantitation.** A deletion library of 6,025 strains (see above) was arrayed at a density of 6,144 strains per plate on both 10 nM and 30 nM rapamycin and on DMSO as a control (small molecules are dissolved in yeast extract/peptone/dextrose, 2% agar, and 0.1% DMSO). Cell arrays were imaged by using a custom charge-coupled device imaging system, and growth of each strain was measured in the grayscale intensity of the images. To make the three arrays comparable, the intensity values in 10 nM rapamycin were normalized to that in DMSO according to the average intensity (most strains grew in 10 nM rapamycin as well as in DMSO); the intensity values in 30 nM were normalized against DMSO based on the average background value (most strains show little growth in 30 nM rapamycin). The ratios of intensity in rapamycin over that in DMSO were used to score for hypersensitivity or resistance to rapamycin. Only those strains that showed significant growth in DMSO and with 10 nM rapamycin/DMSO ratios <0.5 were accepted as hypersensitive. Only strains that showed significant growth in rapamycin and with 30 nM rapamycin/DMSO ratios >0.5 were accepted as resistant.

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Rapamycin (Calbiochem, La Jolla, CA, USA) was dissolved

in dimethyl sulfoxide (DMSO, Sigma) and used

at the concentration of 10 nM.

=> Linquidst used 5nM as MIC (miminal inhibition concentration?) in 2010 Sci.