

Certificate of Analysis

Catalog Number	BP13349
Product Name	MKC3946

Physical and Chemical Properties

CAS No.	1093119-54-0
Chemical Formula	C21H20N2O3S
Molecular Weight	380.46
Solubility	DMSO: 30 mg/mL (78.85 mM)
Storage	Powder: -20°C for 2 years In solvent: -80°C for 1 year
Chemical Structure OR Tested Image	O_{H}

Product Information

Description	MKC3946 is an effective and soluble IRE1 α inhibitor which triggered modest growth inhibition in multiple myeloma cell lines.
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In vitro	MKC-3946 blocks XBP1 mRNA splicing and exhibit cytotoxicity against AML cells. MKC-3946 inhibits XBP1S expression induced by tunicamycin (TM) in NB4 cells (B) and AML samples from patients . MKC-3946 prevents the splicing of the XBP1 mRNA in response to ER stress caused by mutant proinsulin production . MKC-3946 is an IRE1 α endoribonuclease domain inhibitor that blocks XBP1 mRNA splicing and triggers modest growth inhibition in MM cells. MKC-3946 inhibits XBP1s expression induced by Tm in a dose-dependent manner but does not affect phosphorylation of IRE1 α . MKC-3946 blocks XBP1 splicing and enhances cytotoxicity induced by bortezomib or 17-AAG. MKC-3946 (10µM) enhances ER stress-mediated apoptosis induced by bortezomib or 17-AAG, and enhances cytotoxicity of ER stressors, even in the presence of BMSCs or exogenous IL-6 .
In vivo	MKC-3946 (100 mg/kg, i.p.) inhibits XBP1 splicing in a model of ER stress in vivo, associated with significant growth inhibition of MM cells, alone or with bortezomib. MKC-3946 significantly reduces MM tumor growth in the treatment versus the control group. Inhibition of XBP1 splicing by MKC-3946 is associated with decreased MM growth in vivo, alone or in combination with bortezomib .
Analytical Data	

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HPLC	Shows Min >99% purity
H-NMR	Consistent with structure
Stability and Solubility Advice	Information on product stability, especially in solution, has rarely been reported and in most cases we can only provide a general guideline. We recommend that once the stock solution has been prepared, it be stored in equal quantities in sealed vials and used within 1 month. Avoid repeated freezing and thawing cycles. Storage conditions for some special products should be referred to their storage details.

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