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# Data Sheet

### Product Information

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| Catalog Number | BP13349 |
| Product Name | MKC3946 |
| Description | MKC3946 is an effective and soluble IRE1α inhibitor which triggered modest growth inhibition in multiple myeloma cell lines. |
| 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 IRE1α 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 IRE1α. 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 . |
| CAS No. | 1093119-54-0 |
| Chemical Formula | C21H20N2O3S |
| Molecular Weight | 380.46 |

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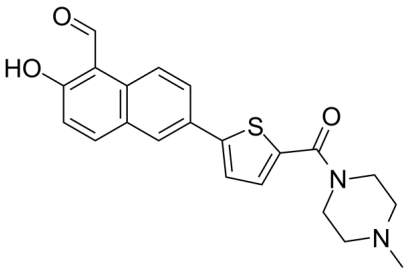
| Solubility | DMSO: 30 mg/mL (78.85 mM) |
| Storage | Powder: -20°C for 2 years<br>In solvent: -80°C for 1 year |
| Chemical Structure<br>OR<br>Tested Image |  |

Purdue Bioscience Inc.

750 50th St, Brooklyn, NY 11220, USA

https://www.purduebio.com

1-877.618.7311

info@purduebio.com

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