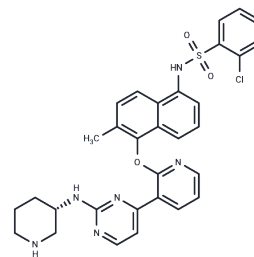


## Kira8

## Chemical Properties

CAS No. :	1630086-20-2
Formula:	C <sub>31</sub> H <sub>29</sub> ClN <sub>6</sub> O <sub>3</sub> S
Molecular Weight:	601.12
Storage:	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	Kira8 (AMG-18) is a mono-selective IRE1 $\alpha$ inhibitor that allosterically attenuates IRE1 $\alpha$ RNase activity with an IC <sub>50</sub> of 5.9 nM.
Targets(IC <sub>50</sub> )	IRE1
In vitro	Kira8 more effectively causes IRE1 $\alpha$ -driven apoptosis in INS-1 cells than KIRA6 and also reverses XBP1 splicing promoted by GNF-2. Kira8 blocks IRE1 $\alpha$ oligomerization and effectively inhibits IRE1 $\alpha$ RNase activity against XBP1 and Ins2 RNAs.
In vivo	One week of treatment of pre-diabetic NODs mice with Kira8 (50 mg/kg; i.p.; once a day) causes obvious reductions in islet XBP1 splicing and TXNIP mRNAs. It also preserves Ins1/Ins2, BiP, and MANF mRNAs. Male Ins2+/Akita mice are injected i.p. with KIRA8 (50 mg/kg; daily; for 35 days), obviously reduction of hyperglycemia becomes apparent over several weeks.

## Solubility Information

Solubility	DMSO: 150 mg/mL (249.53 mM),Sonication is recommended. H <sub>2</sub> O: insoluble (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (3.33 mM),Sonication is recommended. <i>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 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.</i>

### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	1.6636 mL	8.3178 mL	16.6356 mL
5 mM	0.3327 mL	1.6636 mL	3.3271 mL
10 mM	0.1664 mL	0.8318 mL	1.6636 mL
50 mM	0.0333 mL	0.1664 mL	0.3327 mL

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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

Morita S, et al. Targeting ABL-IRE1 $\alpha$  Signaling Spares ER-Stressed Pancreatic  $\beta$  Cells to Reverse Autoimmune Diabetes. Cell Metab. 2017 Apr 4;25(4):883-897.e8.

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Tel:781-999-4286 E\_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481