Product Datasheet

KIRA6

Catalog No. **BP-02139** · CAS **1589527-65-0** · Form **free base** · Physical state **solid** · Color **off-white to gray** · Version **1.0** · Revision **2026-09-02**

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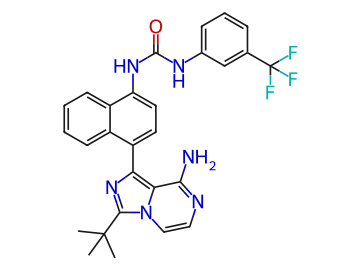
Target	Research area
IRE1	**Metabolic Disease; Inflammation/Immunology; Cancer**

Molecular formula	**$C_{28}H_{25}F_3N_6O$**
Molecular weight	**518.5329**

STRUCTURE



DESCRIPTION

KIRA6 is an advanced small-molecule IRE1α RNase kinase inhibitor with an IC50 of 0.6 μM[2]. KIRA6 can trigger an apoptotic response.

BIOLOGICAL ACTIVITY

In Vitro

KIRA6 (1nM-100μM) bounds to the cytoplasmic domain of KIT with a Kd value of 10.8 ?μM.

KIRA6 (10-1000 nM; 72 hours) strongly compromises the viability of the KIT-dependent cell line HMC-1.1 at the low nM concentration, in a manner that coincided with KIT blockade.

KIRA6 (10-1000 nM; 1 hour) reduces signaling output of KIT,? including the phosphorylation of KIT as well as its downstream signaling modules, PSTAT5 and phosphorylated ERK1/2.

KIRA6 (1 μM; 0-48 hours) inhibits Ins1 mRNA decay from IRE1α hyperactivation at a dose-dependent manner.

KIRA6 (0.1-10μM; 72 hours) dose-dependently reduces 1NM-PP1 potentiation of Ins1 apoptosis during ER stress in a dose-dependent manner.

In Vivo

KIRA6 (intraperitoneal injection; 5 mg/kg; 37 days) shows significant amelioration of random glucose levels over several weeks compared to vehicle, both fed ad lib.

KIRA6 (intraperitoneal injection; 5 mg/kg; 21 or 18 days postinjections) increases both plasma insulin and C-peptide levels, remains insulin-positive islet areas at high level after stopping injections in the Akita Mouse.

SOLUBILITY

Soluble in DMSO

In vitro	DMSO : 25 mg/mL

REFERENCES

[1]. Mahameed M,et al. The unfolded protein response modulators GSK2606414 and KIRA6 are potent KIT inhibitors. Cell Death Dis. 2019 Apr 1;10(4):300.

[2]. Ghosh R, et al. Allosteric inhibition of the IRE1α RNase preserves cell viability and function during endoplasmic reticulum stress. Cell. 2014 Jul 31;158(3):534-48.

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