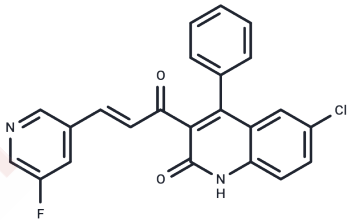
Data Sheet (Cat.No.T5173)

TargetMol

SBI-0640756

Chemical Properties



CAS No. : 1821280-29-8

Formula: C23H14ClFN2O2

Molecular Weight: 404.82

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	SBI-0640756 (SBI-756) (SBI-756) is a first-in-class inhibitor that targets eIF4G1 and disrupts the eIF4F complex.
Targets(IC50)	Autophagy,PERK
In vitro	SBI-0640756 effectively dissociated eIF4G1 from the eIF4E in a dose-dependent manner, which was accompanied by a concomitant increase in 4E-BP1:eIF4E binding, reflective of impaired eIF4F complex formation. SBI-0640756 also inhibits the AKT/mTORC1 signaling and mTORC1 inhibition disrupts the eIF4F complex via activation of 4E-BPs. Whereas torin1 induced dissociation of eIF4G1 from eIF4E in WT but not in 4E-BP DKO MEFs, SBI-0640756 reduced eIF4G1:eIF4E association in both WT and 4E-BP DKO MEFs. Likewise, SBI-0640756 but not torin1 attenuated the proliferation of E1A/RAS-transformed 4E-BP DKO MEFs.
In vivo	Administration of SBI-0640756 only, starting 11 weeks after genetic inactivation of Ink4a and induction of NRasQ61E (about 10–14 days prior to tumor appearance), delayed tumor onset (from 20–26 weeks) and reduced tumor incidence, by 50%, compared with the control non-treated group. The growth of established tumors was largely inhibited by treatment with either BRAFi alone or a combination of BRAFi plus SBI-0640756.
Cell Research	Cells were rinsed with PBS and lysed as previously described. Protein concentration was determined using Coomassie Plus Protein Assay Reagent. Equal amounts of cell lysate proteins (50 μg) were separated on SDS-PAGE and transferred to polyvinylidene difluoride membranes. Membranes were blocked (5% BSA/TBST, 1 h) and incubated with primary antibodies (1 h at room temperate or overnight at 4°C), with shaking. Following three TBST washes, membranes were incubated for 1 h at room temperature secondary antibodies (1:10,000). Detection and quantifications were made using Odyssey Infrared Imaging System, or by exposing them to X-ray film. Antibodies against p-AKT, p-PRAS40, p-IKK, p-IκB, p-TSC, p-mTOR, p-p70S6K, p-RPS6, p-4E-BP1, pSGK3, AKT, PRAS40, IKK, IκB, mTOR, p70S6K, RPS6, 4E-BP1, GSK3, eIF4G1, and eIF4E were purchased from Cell Signaling Technology. Antibodies against β-actin and α-tubulin were obtained from Santa Cruz Biotechnology. Secondary antibodies were goat anti-rabbit Alexa-680 F(ab')2 and goat anti-mouse IRDye 800 F(ab')2. All antibodies were used according to the suppliers' recommendations.

Solubility Information

Solubility	H2O: Insoluble, DMSO: 50 mg/mL (123.51 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4702 mL	12.3512 mL	24.7023 mL
5 mM	0.494 mL	2.4702 mL	4.9405 mL
10 mM	0.247 mL	1.2351 mL	2.4702 mL
50 mM	0.0494 mL	0.247 mL	0.494 mL

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

Feng Y, et al. SBI-0640756 Attenuates the Growth of Clinically Unresponsive Melanomas by Disrupting the eIF4F Translation Initiation Complex. Cancer Res. 2015 Dec 15;75(24):5211-8.