

KU-60019

Catalog No: tcsc0221



Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Size: 100mg



Specifications

CAS No:

925701-46-8

Formula:

$C_{30}H_{33}N_3O_5S$

Pathway:

Cell Cycle/DNA Damage;PI3K/Akt/mTOR

Target:

ATM/ATR;ATM/ATR

Purity / Grade:

>98%

Solubility:

DMSO : ≥ 30 mg/mL (54.78 mM)

Observed Molecular Weight:

547.67

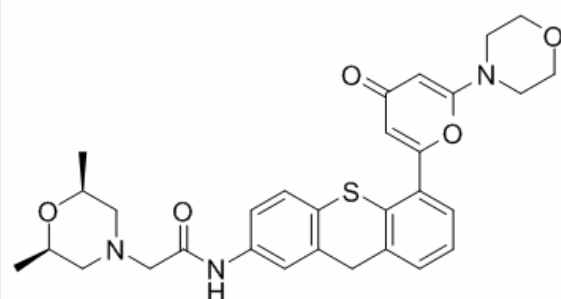
Product Description

KU-60019 is an improved **ATM** kinase-specific inhibitor with **IC₅₀** of 6.3 nM.

IC₅₀ & Target: IC₅₀: 6.3 nM (ATM)^[1]

In Vitro: KU-60019 is an improved analogue of KU-55933. KU-55933 has an IC₅₀ of 13 nM and K_i of 2.2 nM in vitro and is highly specific for the ATM kinase using a panel of 60 protein kinases. KU-60019 is an improved inhibitor of the ATM kinase with an IC₅₀ of 6.3 nM, approximately half that of KU-55933. The IC₅₀ values for DNA-PKcs and ATR are 1.7 and >10 μM, respectively, almost 270- and 1600-fold higher than for ATM. KU-60019 is 10-fold more effective than KU-55933 at blocking radiation-induced phosphorylation of key ATM targets in human glioma cells. In human U87 glioma cells, KU-55933 completely inhibits phosphorylation of p53 (S15) at 10 μM but not at 3 μM, whereas γ-H2AX levels are only partly reduced with 10 μM 1 h after irradiation. By comparison, 3 μM KU-60019 completely inhibits p53 phosphorylation and partial inhibits at 1 μM^[1].

In Vivo: Despite PTEN-deficient control tumors reaching a 4-fold increase in size before PTEN wild-type controls, KU-60019-treated PTEN-deficient tumors display a statistically significant slowing in growth. This growth inhibition is especially evident at the start of the experiment (days 5-12) just after KU-60019 is administered (days 1-5)^[2].



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!