

# KU-60019

**Catalog No: tcsc0221**



## Available Sizes

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**Size:** 5mg

**Size:** 10mg

**Size:** 50mg

**Size:** 100mg



## Specifications

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**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 :  $\geq 30$  mg/mL (54.78 mM)

**Observed Molecular Weight:**

547.67

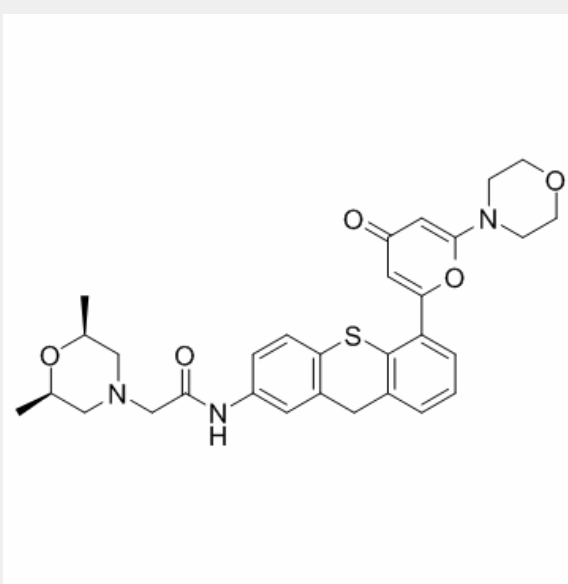
## Product Description

KU-60019 is an improved **ATM** kinase-specific inhibitor with **IC<sub>50</sub>** of 6.3 nM.

IC50 & Target: IC50: 6.3 nM (ATM)<sup>[1]</sup>

**In Vitro:** KU-60019 is an improved analogue of KU-55933. KU-55933 has an IC<sub>50</sub> of 13 nM and K<sub>i</sub> 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 IC<sub>50</sub> of 6.3 nM, approximately half that of KU-55933. The IC<sub>50</sub> 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<sup>[1]</sup>.

**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)<sup>[2]</sup>.



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