

# KU-57788

Catalog No: tcsc0034



## Available Sizes

**Size:** 5mg

**Size:** 10mg

**Size:** 50mg

**Size:** 100mg



## Specifications

**CAS No:**

503468-95-9

**Formula:**

$C_{25}H_{19}NO_3S$

**Pathway:**

PI3K/Akt/mTOR;Cell Cycle/DNA Damage;Cell Cycle/DNA Damage

**Target:**

DNA-PK;DNA-PK;CRISPR/Cas9

**Purity / Grade:**

>98%

**Solubility:**

DMSO : 14.29 mg/mL (34.56 mM; Need ultrasonic)

**Alternative Names:**

NU7441

**Observed Molecular Weight:**

413.49

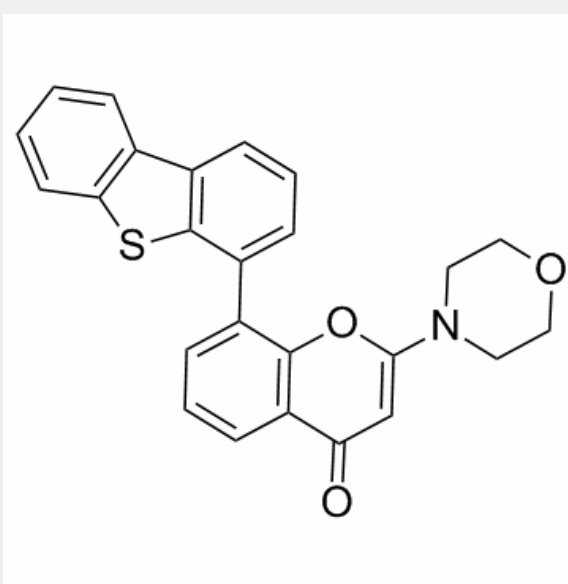
## Product Description

KU-57788 is a potent and selective inhibitor of **DNA-PK**, with an **IC<sub>50</sub>** of 13 nM, and also increases **CRISPR/Cas9**-mediated editing frequencies.

IC50 & Target: IC50: 13 nM (DNA-PK)<sup>[3]</sup>, 1 μM (BRD4), 3.5 μM (BRDT)<sup>[4]</sup>

**In Vitro:** NU7441 at non-toxic concentration of 0.3 μM induces radio-sensitization in non-small cell lung cancer cells irradiated with low-LET and high-LET radiation, and does not show double strand break-repair inhibition in irradiated cells. NU7441 (3 μM) shows significantly increased persistent γ-H2AX signals. NU7441 (0.3 μM) causes significant G2/M arrest and a remarkable increase of DNA fragmentation and enhances cellular senescence in irradiated H1299 cells<sup>[1]</sup>. NU7441 (0.5 to 10 μM) inhibits the growth of liver cancer HepG2 cells dose- and time-dependently. NU7441 reduces pDNA-PKcs (S2056) protein expression in liver cancer cells. Furthermore, double treatment of NU7441 and 60Coγ IR affects DNA damage repair<sup>[2]</sup>. NU7441 is solvent-exposed in BRD4, this inhibitor can be classified as a Type I BRD inhibitor<sup>[4]</sup>. NU7441 reduces the frequency of NHEJ while increasing the rate of HDR following Cas9-mediated DNA cleavage<sup>[5]</sup>.

**In Vivo:** lung cancer cells irradiated with low-LET and high-LET radiation, and does not show double strand break-repair inhibition in irradiated cells. KU-57788 (3 μM) shows significantly increased persistent γ-H2AX signals. KU-57788 (0.3 μM) causes significant G2/M arrest and a remarkable increase of DNA fragmentation and enhances cellular senescence in irradiated H1299 cells<sup>[1]</sup>. KU-57788 (0.5 to 10 μM) inhibits the growth of liver cancer HepG2 cells dose- and time-dependently. KU-57788 reduces pDNA-PKcs (S2056) protein expression in liver cancer cells. Furthermore, double treatment of KU-57788 and 60Coγ IR affects DNA damage repair<sup>[2]</sup>. KU-57788 weakly inhibits BRD4 and BRDT with IC<sub>50</sub>s of 1 μM and 3.5 μM, respectively. KU-57788 is solvent-exposed in BRD4, this inhibitor can be classified as a Type I BRD inhibitor<sup>[4]</sup>. KU-57788 reduces the frequency of NHEJ while increasing the rate of HDR following Cas9-mediated DNA cleavage<sup>[5]</sup>.



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