

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

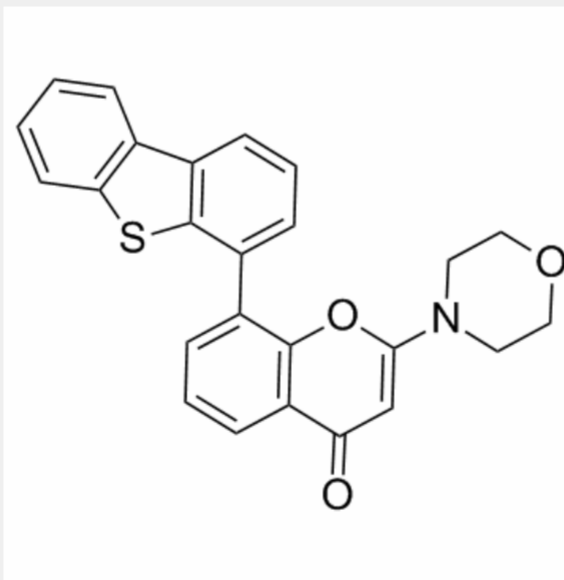
Product Description

KU-57788 is a potent and selective inhibitor of **DNA-PK**, with an **IC₅₀** of 13 nM, and also increases **CRISPR/Cas9**-mediated editing frequencies.

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

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^[1]. 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^[2]. NU7441 is solvent-exposed in BRD4, this inhibitor can be classified as a Type I BRD inhibitor^[4]. NU7441 reduces the frequency of NHEJ while increasing the rate of HDR following Cas9-mediated DNA cleavage^[5].

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^[1]. 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^[2]. KU-57788 weakly inhibits BRD4 and BRDT with IC₅₀s 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^[4]. KU-57788 reduces the frequency of NHEJ while increasing the rate of HDR following Cas9-mediated DNA cleavage^[5].



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