Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

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

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Product Description

KU-57788 is a potent and selective inhibitor of **DNA-PK**, with an **IC_{50}** 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 IC_{50}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[4]. KU-57788 reduces the frequency of NHEJ while increasing the rate of HDR following Cas9-mediated DNA cleavage[5].