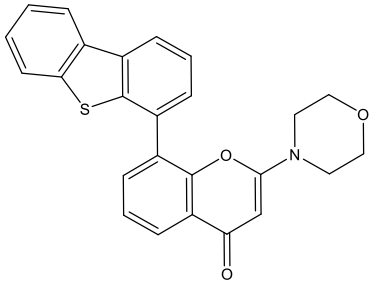
Catalog # 10-4810

NU7441

CAS# 503468-95-9

8-Dibenzothiophen-4-yl-2-morpholin-4-ylchromen-4-one; Ku-57788

Lot # FBS2031



NU7441 is a potent (IC_{50} = 13 nM) and selective ATP-competitive inhibitor of DNA-dependent protein kinase (DNA-PK).[1,2] It increased the toxicity of ionizing radiation and etoposide on SW620 human colon cancer lines via impeding DNA double-strand break repair.[3] NU7441 also increased the radio/chemosensitivity of various other cancer cell lines.[3-6]

1) Leahy *et al.* (2004), *Identification of a highly potent and selective DNA-dependent protein kinase (DNA-PK) inhibitor (NU7441) by screening of chromenone libraries*; Bioorg. Med. Chem. Lett. **14** 6083
2) Hardcastle *et al.* (2005), *Discovery of potent chromen-4-one inhibitors of the DNA-dependent protein kinase (DNA-PK) using a small-molecule library approach*: J. Med. Chem. **48** 7829
3) Zhao *et al.* (2006), *Preclinical evaluation of a potent novel DNA-dependent protein kinase inhibitor NU7441*: Cancer Res. **66** 5354
4) Ciszewski *et al.* (2014), *DNA-PK inhibition by NU7441 sensitizes breast cancer cells to ionizing radiation and doxorubicin*: Breast Cancer Res.Treat. **143** 83
5) Yang *et al.* (2016), *NU7441 Enhances the Radiosensitivity of Liver Cancer Cells*: Cell Physiol. Biochem. **38** 1897
6) Geng *et al.* (2019), *DNA-PKcs inhibitor increases the sensitivity of gastric cancer cells to radiotherapy*: Oncol. Rep. epub ahead of print

PHYSICAL DATA

Molecular Weight:	413.49
Molecular Formula:	$C_{25}H_{19}NO_3S$
Purity:	98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (10 mg/mL with warming)
Physical Description:	Off-white to beige solid
Storage and Stability:	Store as supplied at -20°C for up to 1 year from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 3 months.

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