

## KU-0063794

Catalog No: tcsc0065



### Available Sizes

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**Size:** 5mg

**Size:** 10mg

**Size:** 50mg

**Size:** 100mg



### Specifications

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**CAS No:**

938440-64-3

**Formula:**

$C_{25}H_{31}N_5O_4$

**Pathway:**

PI3K/Akt/mTOR

**Target:**

mTOR

**Purity / Grade:**

>98%

**Solubility:**

DMSO : 16.67 mg/mL (35.81 mM; Need ultrasonic)

**Observed Molecular Weight:**

465.54

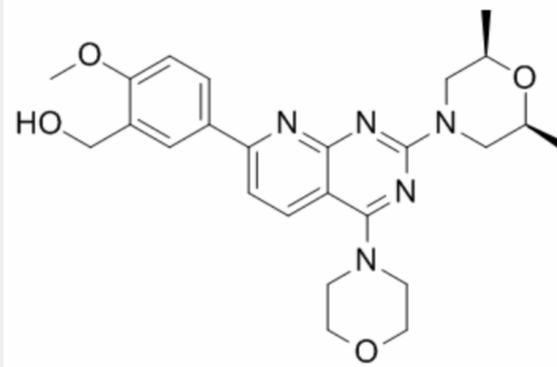
### Product Description

KU-0063794 is a potent and highly specific dual-**mTOR** inhibitor, with **IC<sub>50</sub>** of appr 10 nM for **mTORC1** and **mTORC2** in cell-free

assays, but has no effect on PI3Ks.

IC50 & Target: IC50: 10 nM (mTORC1), 10 nM (mTORC2)<sup>[1]</sup>

**In Vitro:** Ku-0063794 is cell permeant, suppresses activation and hydrophobic motif phosphorylation of Akt, S6K and SGK, but not RSK (ribosomal S6 kinase), an AGC kinase not regulated by mTOR. Ku-0063794 also inhibits phosphorylation of the T-loop Thr308 residue of Akt phosphorylated by PDK1 (3-phosphoinositide-dependent protein kinase-1). Ku-0063794 induces a much greater dephosphorylation of the mTORC1 substrate 4E-BP1 (eukaryotic initiation factor 4E-binding protein 1) than rapamycin, even in mTORC2-deficient cells, suggesting a form of mTOR distinct from mTORC1, or mTORC2 phosphorylates 4E-BP1. Ku-0063794 also suppresses cell growth and induced a G1-cell-cycle arrest<sup>[1]</sup>. Ku0063794 does not alter nuclear phospho-Mst1-Thr-120 levels in LNCaP cell nuclei, whereas Ku0063794 or CCI-779 increases phospho-Mst1-Thr-120 levels in C4-2 cell nuclei<sup>[2]</sup>. The combination of GDC-0941 and KU0063794 inhibits the phosphorylation of 4EBP1 and S6 to a similar extent to that caused by single agent NVP-BE2235 in HCT116, DLD1 and HT29 cell lines<sup>[3]</sup>.



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