

WYE-354

Catalog No: tcsc0183



Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg



Specifications

CAS No:

1062169-56-5

Formula:

$C_{24}H_{29}N_7O_5$

Pathway:

PI3K/Akt/mTOR;Autophagy

Target:

mTOR;Autophagy

Purity / Grade:

>98%

Solubility:

DMSO : ≥ 26 mg/mL (52.47 mM)

Observed Molecular Weight:

495.53

Product Description

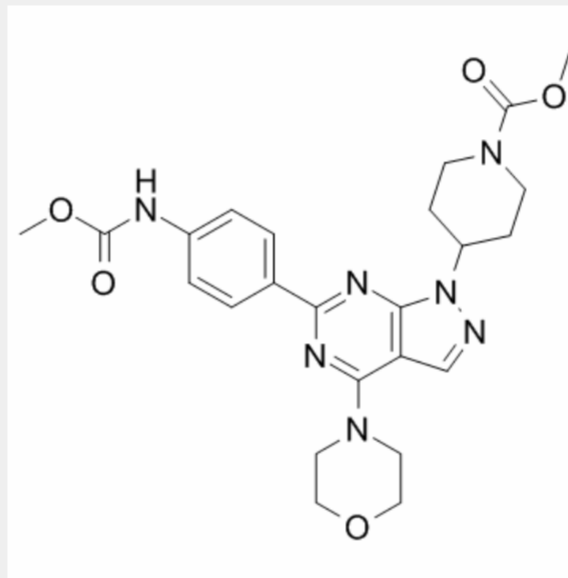
WYE-354 is an ATP-competitive **mTOR** inhibitor with an **IC₅₀** of 5 nM. WYE-354 also inhibits **PI3K α** and **PI3K γ** with **IC₅₀s** of 1.89 μ M and 7.37 μ M, respectively. WYE-354 inhibits both **mTORC1** and **mTORC2**.

IC50 & Target: IC50: 5 nM (mTOR), 1.89 μ M (PI3K α), 7.37 μ M (PI3K γ)^[1]

mTORC1, mTORC2^[1]

In Vitro: In the DELFIA measuring His6-S6K1 T389 phosphorylation, WYE-354 inhibits recombinant mTOR enzyme with an IC₅₀ of 5 nM^[1]. Cell viability is analyzed by MTS assay. G-415 and TGBC-2TKB cell lines are treated with increasing concentrations of WYE-354 (0.1, 1, 5 and 10 μ M) for 24, 48, and 72 hours. WYE-354 significantly reduces cell viability starting at a 1 μ M concentration after a 24 hours exposure, in both studied cell lines (P[2]).

In Vivo: The effect of Rapamycin and WYE-354 on tumor growth is evaluated in xenograft GBC tumor models. 2×10^6 or 5×10^6 cells of G-415 or TGBC2TKB, respectively, are xenotransplanted into NOD-SCID mice subcutaneously. When tumors reach an average volume of 100 mm³, the mice are treated either with Rapamycin or WYE354. Rapamycin is administered i.p. at a concentration of 10 mg/kg, daily for 5 days per week for 3 weeks, while WYE-354 is administrated at a daily i.p. dose of 50 mg/kg for 5 days. Mice are sacrificed 30 days after the initiation of the treatments and an autopsy is performed that include removal of the entire tumor area. Mice treated with WYE-354 exhibit 68.6% and 52.4% reduction in average tumor size (P[2]).



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