

## 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:** 

Solubility: DMSO :  $\geq$  26 mg/mL (52.47 mM)

## **Observed Molecular Weight:**

495.53

## **Product Description**

WYE-354 is an ATP-competitive **mTOR** inhibitor with an IC<sub>50</sub> of 5 nM. WYE-354 also inhibits **PI3K** $\alpha$  and **PI3K** $\gamma$  with IC<sub>50</sub>s of 1.89  $\mu$ M and 7.37  $\mu$ M, respectively. WYE-354 inhibits both **mTORC1** and **mTORC2**.

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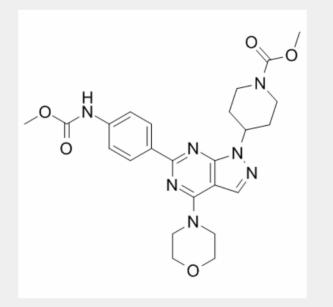


IC50 & Target: IC50: 5 nM (mTOR), 1.89 μM (PI3Kα), 7.37 μM (PI3Kγ)<sup>[1]</sup>

## mTORC1, mTORC2<sup>[1]</sup>

*In Vitro:* In the DELFIA measuring His6-S6K1 T389 phosphorylation, WYE-354 inhibits recombinant mTOR enzyme with an IC<sub>50</sub> 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  $\mu$ M) for 24, 48, and 72 hours. WYE-354 significantly reduces cell viability starting at a 1  $\mu$ 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.  $2 \times 10^6$  or  $5 \times 10^6$  cells of G-415 or TGBC2TKB, respectively, are xenotransplanted into NOD-SCID mice subcutaneously. When tumors reach an average volume of 100 mm<sup>3</sup>, 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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