

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

**Observed Molecular Weight:**

495.53

## Product Description

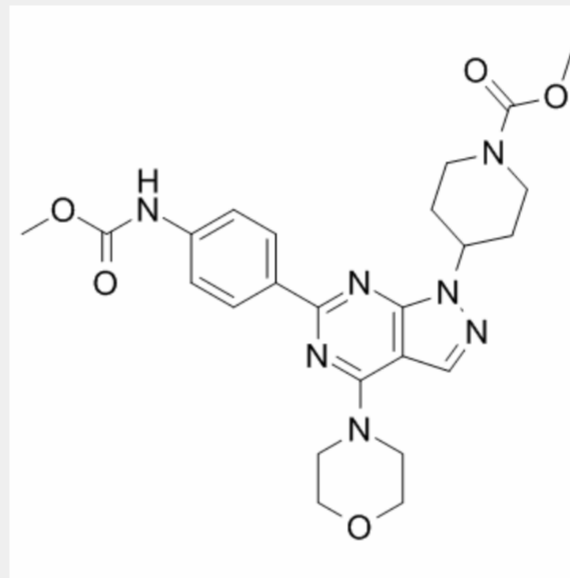
WYE-354 is an ATP-competitive **mTOR** inhibitor with an **IC<sub>50</sub>** of 5 nM. WYE-354 also inhibits **PI3K $\alpha$**  and **PI3K $\gamma$**  with **IC<sub>50</sub>s** of 1.89  $\mu$ M and 7.37  $\mu$ M, respectively. WYE-354 inhibits both **mTORC1** and **mTORC2**.

IC50 & Target: IC50: 5 nM (mTOR), 1.89  $\mu$ M (PI3K $\alpha$ ), 7.37  $\mu$ M (PI3K $\gamma$ )<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<sup>[1]</sup>. 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 administered 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]).



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