

# Alvespimycin

Catalog No: tcsc0912



## Available Sizes

Size: 1mg



## Specifications

### CAS No:

467214-20-6

### Formula:

$C_{32}H_{48}N_4O_8$

### Pathway:

Metabolic Enzyme/Protease;Cell Cycle/DNA Damage

### Target:

HSP;HSP

### Purity / Grade:

>98%

### Solubility:

10 mM in DMSO

### Alternative Names:

17-DMAG;NSC 707545

### Observed Molecular Weight:

616.75

## Product Description

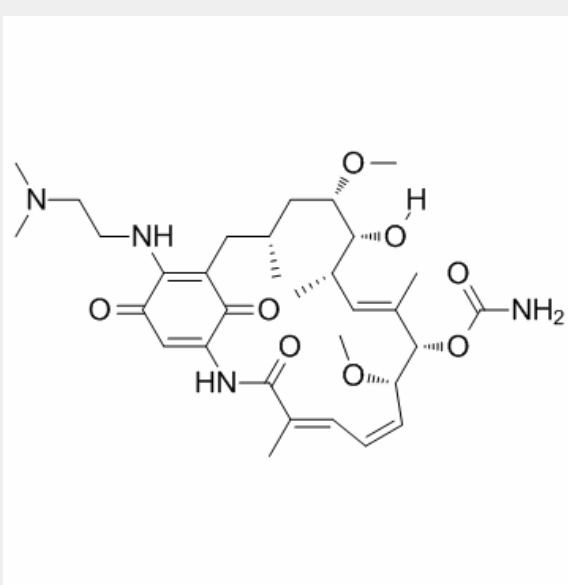
Alvespimycin is a potent inhibitor of **Hsp90**, binding to Hsp90 with an **EC<sub>50</sub>** of 62 ± 29 nM.

IC50 & Target: EC50: 62 nM (Hsp90)<sup>[1]</sup>

**In Vitro:** Alvespimycin is a potent inhibitor of Hsp90, binding to Hsp90 with an EC<sub>50</sub> of 62 nM. Alvespimycin (17-DMAG) inhibits the

growth of the human cancer cell lines SKBR3 and SKOV3, which overexpress Hsp90 client protein Her2, and causes down-regulation of Her2 as well as induction of Hsp70 consistent with Hsp90 inhibition, for Her2 degradation with  $EC_{50}$  of  $8 \pm 4$  nM and  $46 \pm 24$  nM in SKBR3 and SKOV3 cells, respectively; for Hsp70 induction with  $EC_{50}$  of  $4 \pm 2$  nM and  $14 \pm 7$  nM in SKBR3 and SKOV3 cells, respectively<sup>[1]</sup>. Compared with the vehicle control, Alvespimycin dose-dependent apoptosis (P[2]).

**In Vivo:** The tumors are grown for two months before the start of i.p. injections every four days over one month with 0, 50, 100 and 200 mg/kg dipalmitoyl-radicicol or 0, 5, 10 and 20 mg/kg Alvespimycin. Despite sample heterogeneity, the HSP90 inhibitor-treated animals have significantly lower tumour volumes than the vehicle control-treated animals. HSP90 inhibitors have been shown to cause liver toxicity in an animal model of gastrointestinal cancer. Nevertheless, the reduction in tumor size using dipalmitoyl-radicicol is statistically significant at 100 mg/kg, while Alvespimycin at either 10 or 20 mg/kg elicits a significant reduction in tumor size<sup>[3]</sup>.



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