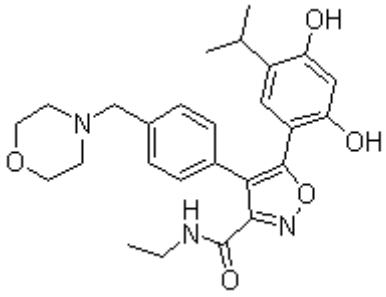
Product Introduction

AUY922

AUY922 (NVP-AUY922) is a highly potent HSP90 inhibitor for **HSP90α/β** with **IC50** of 13 nM /21 nM, weaker potency against the HSP90 family members GRP94 and TRAP-1, exhibits the tightest binding of any small-molecule HSP90 ligand. Phase 1/2.

Technical Data:

Molecular Weight (MW):	465.54	
Formula:	$C_{26}H_{31}N_3O_5$	
Solubility (25℃) * <1 mg/ml means slightly soluble or insoluble:	DMSO 93 mg/mL	
	Water <1mg/mL	
	Ethanol 93 mg/mL	
Purity:	>98%	
Storage:	3 years -20℃ Powder	
	6 months-80℃ in DMSO	
CAS No.:	747412-49-3	

Biological Activity

NVP-AUY922 inhibits proliferation of various human cancer cell lines in vitro, with an average GI50 of 9 nM. [1] The IC50 values of NVP-AUY922 fall in the range of 2 to 40 nM in these gastric cancer cell lines. IC50 value for the BEAS-2B cells is 28.49 nM. Treatment with NVP-AUY922 does not influence the expression of HSP90, but expression of HSP70 gets elevated by NVP-AUY922 treatment. NVP-AUY922 increases the binding of HSP70 to HSP90. NVP-AUY922 causes p23 dissociation from the HSP90 complex and can then

recruit HSP70 to the HSP90 complex. [1] After the treatment with NVP-AUY922, expression of receptor tyrosine kinases including VEGFR1, 2, 3 and PDGFRα is decreased. A decrease is also noticed in the expression of Akt and phospho-Akt. Meanwhile, treatment with NVP-AUY922 causes decreased expression of HER-2 in NCI-N87 cells. NVP-AUY922 treatment results in binding of HSP90 to client proteins and setting them up as targets for degradation by the proteasome. NVP-AUY922 can influence cell growth by affecting multiple signaling pathways. In addition, treatment with the proteasome inhibitor, MG132, restores expression of thymidylate synthase, which is decreased by NVP-AUY922. NVP-AUY922 increases the expression of cleaved caspase-3 leading to apoptosis in HSC-2 cells.[1]

Treatment with NVP-AUY922 causes a robust antitumor response and inhibits p-Akt and VEGF expression in an HSC-2 xenograft model. [2] In BT474, NVP-AUY922 shows complete loss of ERBB2 and substantial depletion of ERα, in addition to reductions in CDK4 and phospho-ERK1/2. [3]

References

[1] Lee KH, et al. Cancer Sci, 2011, 102(7), 1388-1395.

[2] Okui T, et al. Anticancer Res, 2011, 31(4), 1197-1204.

[3] Eccles SA, et al. Cancer Res, 2008, 68(8), 2850-2860.