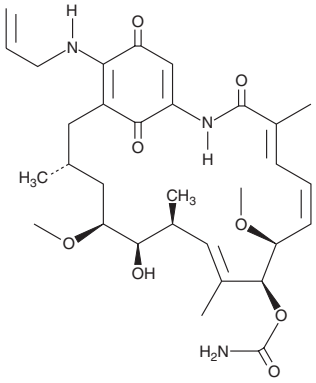
PRODUCT INFORMATION

17-AAG

Item No. 11039



CAS Registry No.:	75747-14-7
Formal Name:	17-demethoxy-17-(2-propenylamino)-geldanamycin
Synonyms:	BMS 722782, CP 127374, KOS 953, NSC 330507, Tanespimycin
MF:	$C_{31}H_{43}N_3O_3$
FW:	585.7
Purity:	≥98%
UV/Vis.:	λ_{max}: 219, 239, 332, 528 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

17-AAG is supplied as a crystalline solid. A stock solution may be made by dissolving the 17-AAG in the solvent of choice. 17-AAG is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of 17-AAG in these solvents is approximately 5, 20, and 10 mg/ml, respectively.

17-AAG is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 17-AAG should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 17-AAG has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

17-AAG is an inhibitor of heat shock protein 90 (Hsp90) and a derivative of geldanamycin (Item No. 13355) that selectively inhibits BT474 tumor cell Hsp90 over fibroblast Hsp90 (IC_{50}s = 5 and 943 nM, respectively).[1] It inhibits the growth of prostate cancer cell lines (IC_{50}s = 25-45 nM) and promotes the degradation of HER2 and induces growth arrest and apoptosis in breast cancer cells overexpressing HER2 (IC_{50}s = 4-72 nM).[2,3] *In vivo*, 17-AAG (25 mg/kg, i.p.) reduces tumor size in a G-415 gallbladder cancer mouse xenograft model.[4]

References

1. Kamal, A., Thao, L., Sensintaffar, J., *et al.* A high-affinity conformation of Hsp90 confers tumour selectivity on Hsp90 inhibitors. *Nature* **425(6956)**, 407-410 (2003).
2. Solit, D.B., Zheng, F.F., Drobnjak, M., *et al.* 17-allylamino-17-demethoxygeldanamycin induces the degradation of androgen receptor and HER-2/neu and inhibits the growth of prostate cancer xenografts. *Clin. Cancer Res.* **8(5)**, 986-993 (2002).
3. Münster, P.N., Marchion, D.C., Basso, A.D., *et al.* Degredation of HER2 by ansamycins induces growth arrest and apoptosis in cells with HER2 overexpression *via* a HER3, phosphatidylinositol 3'-kinase-AKT-dependent pathway. *Cancer Research* **62(11)**, 3132-3137 (2002).
4. Weber, H., Valbuena, J.R., Barbhuiya, M.A., *et al.* Small molecule inhibitor screening identifified Hsp90 inhibitor 17-AAG as potential therapeutic agent for gallbladder cancer. *Oncotarget* **8(16)**, 26169-26184 (2017).

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