

Product Name:	Herbimycin A
Product Number:	H002
CAS Number:	70563-58-5
Molecular Formula:	C ₃₀ H ₄₂ N ₂ O ₉
Molecular Weight:	574.66
Form:	Powder
Appearance:	Yellow powder
Solubility:	DMSO: Soluble
Source:	<i>Streptomyces hygrosopicus</i>
Storage Conditions:	-20°C
Description:	Herbimycin is a sparingly soluble benzoquinone anti-tumor agent which interacts with the stress-induced chaperone protein Hsp90 (heat shock protein 90).
Mechanism of Action:	Herbimycin A binds specifically to the heat shock protein Hsp90 and to its endoplasmic reticulum homologue GP96, and thus interferes with conformational maturation of proteins and the cellular stress response.
Cancer Applications	In normal cells, Hsp90 stabilizes and folds proteins, however, in tumor cells, Hsp90 activity helps stabilize mutated growth factor and signal proteins which facilitate tumor growth. To prevent this complication, Herbimycin A binds to and inactivates Hsp90 in cancerous cells leading to degradation of cancer cell proteins.
References:	Eichhorn, Kai. "Geldanamycin: The Prototype of a Class of Antitumor Drugs Targeting the Heat Shock Protein 90 Family of Molecular Chaperones." <i>Cell Stress Chaperones</i> 6.2 (2001): 105-12. www.ncbi.gov . Web. 6 Sept. 2012.