NEUROMICS

Docetaxel Data Sheet

Catalog Number:	MC11109	**Product Type:**	Small Molecule
Bio-Activity:	Microtubule stabilizing agent	**CAS #:**	114977-28-5
Research Categories:	Cell death, cancer	**Chemical Name:**	N-Debenzoyl-N-(t-butoxycarbonyl)-10-deacetyltaxol
Solubility:	Soluble in DMSO (up to 25 mg/ml) or in Ethanol (up to 25 mg/ml).	**Molecular Formula:**	C43H53NO14
Purity:	> 98%	**Molecular Weight:**	807.9
Format:	Powder	**Ship Temp:**	Ambient
Storage:	-20°C		

Application Notes

Description/Data:
Antimitotic chemotherapeutic which inhibits via reversible high-affinity binding to microtubules [1]. Induces apoptosis in a variety of cancer cell lines [2] however, tumor cells can quickly develop resistance to docetaxel via several mechanisms [3,4]. Can act in synergy with a variety of other anticancer agents including kinase inhibitors [5,6].

References:

1) Fabbri et al. (2008), Mitotic catastrophe and apoptosis induced by docetaxel in hormone-refractory prostate cancer cells; J. Cell Physiol, 217 494

2) Dosso and Berthold (2008), Docetaxel in the management of prostate cancer: current standard of care and future directions ; Expert Opin. Pharmacother, 9 1969

3) Homma et al. (2008), RPN2 gene confers docetaxel resistance in breast cancer; Nat. Med., 14 939

4) Kars et al. (2008), Reversal of Multidrug Resistance by Synthetic and Natural Compounds in Drug-Resistant MCF-7 Cell Lines Chemotherapy, 54 194

5) Wallin et al. (2012), GDC-0941, A Novel Class I Selective PI3K Inhibitor, Enhances the Efficacy of Docetaxel in Human Breast Cancer Models by Increasing Cell Death In vitro and In Vivo; Clin Cancer Res., May 14: Epub ahead of print.

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6) Heinemann et al. (2011), Synergistic effects of oncolytic reovirus and docetaxel chemotherapy in prostate cancer; BMC Cancer, 11 221

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