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\(^5,6\)

1) Fabbri et al. (2008), *Mitotic catastrophe and apoptosis induced by docetaxel in hormone-refractory prostate cancer cells*; J. Cell Physiol, 217 494.
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
6) Heinemann et al. (2011), *Synergistic effects of oncolytic reovirus and docetaxel chemotherapy in prostate cancer*; BMC Cancer, 11 221

**PHYSICAL DATA**

Molecular Weight: 807.90  
Molecular Formula: C\(_{43}\)H\(_{53}\)NO\(_{14}\)  
Purity: >98% by HPLC  
Solubility: DMSO (up to 25 mg/ml) or ethanol (up to 25 mg/ml)  
Physical Description: White solid  
Storage and Stability: Store as supplied at -20°C for up to one year from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 3 months

Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.

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