

Epothilone

Epothilone is a secondary metabolite produced by the Myxobacterium *Sorangium cellulosum*. It has 16-membered polyketide macro-lactones with a methylthiazole moiety connected to the macrocycle by a short olefinic spacer. Epothilone A and B are two of the major fermentation products and the two differ by a single methyl group at the C12 position of their carbon skeleton.

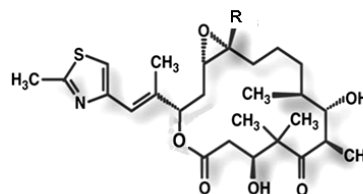
Epothilone shows high potent cytotoxic activity. It is a potent microtubule depolymerizing inhibitor with the mechanism of action similar to that of the well-known anti-cancer drug Taxol (paclitaxel). In addition, epothilone is active even in Taxol-resistant cell lines, and its highly cytotoxic effect against multi-drug resistant tumor cell lines renders this molecule a potential therapeutic compound with great commercial value.

Epothilone is currently used for active pharmaceutical ingredient or intermediate for oncology drugs, such as patupilone or IXEMPRA®. IXEMPRA® (Ixabepilone), a semi-synthetic analog of epothilone B, has been approved by the United States FDA in October 2007 for the treatment of aggressive metastatic or locally advanced breast cancer. Patupilone(EPO906) is now being investigated in phase III clinical trials against ovarian cancer, and in phase II trials in various other tumor types. In addition, several epothilone analogs derived from epothilone B are under clinical trials for the treatment of various cancers.

Samyang Genex Biotechnology R&D center developed a strain of *Sorangium cellulosum* that produces high concentration of epothilone A and B. The center also has developed the purification process for epothilone. Highly purified epothilone A and B in powder form are available for purchase from Samyang Genex Corporation.

For more information about product ;
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Epo A (R = H), Epo B (R = CH₃)



	Epothilone A	Epothilone B
CAS No	152044-53-6	152044-54-7
Molecular formula	C ₂₆ H ₃₉ NO ₆ S	C ₂₇ H ₄₁ NO ₆ S
Molecular weight	493.66	507.69

