上海源叶生物科技有限公司
Shanghai yuanye Bio-Technology Co., Ltd
电话：021-61312973　　传真：021-55068248
网址：www.shyuanye.com
邮箱：shyysw@sina.com

产品名称：Ecteinascidin 770
产品别名：Et-770

生物活性：	
Description	Ecteinascidin 770 (ET-770) is a 1,2,3,4-tetrahydroisoquinoline alkaloid with potent anti-cancer activities; inhibits U373MG cells with an IC50 of 4.83 nM.
IC_{50} & Target	IC50: 4.83 nM (U373MG cell)[1]; 0.6 nM (HCT116 cell), 2.4 nM (QG56 cell), 0.81 nM (DU145)[2]
In Vitro	Ecteinascidin 770 induces apoptosis of U373MG cells. The IC50 concentration of ecteinascidin 770 for killing U373MG glioblastoma cells in culture by using the MTT assay is 4.83 nM by a 72 hour-treatment[1]. The IC50 values against human cell lines HCT116, QG56, and DU145 are 0.6, 2.4, and 0.81 nM, respectively[2]. ET-770 is shown to enhance anoikis response of human lung cancer H23 cells in a dose-dependent manner. Ecteinascidin 770 sensitizes the cells by activating the p53 protein, which in turn down-regulates anti-apoptotic myeloid cell leukemia sequence-1 (MCL1) and up-regulates BCL2-associated X protein (BAX) proteins. However, B-cell lymphoma-2 (BCL2) proteins are not significantly affected by Ecteinascidin 770. The anoikis sensitization of ET-770 is observed in H460 lung cancer cells[3].
References	[1]. Tabunoki H, et al. Molecular network profiling of U373MG human glioblastoma cells following induction of apoptosis by novel marine-derived anti-cancer 1,2,3,4-tetrahydroisoquinoline alkaloids. Cancer Cell Int. 2012 Apr 11;12(1):14. [2]. Saktrakulkla P, et al. Chemistry of ecteinascidins. Part 3: preparation of 2'-N-acyl derivatives of ecteinascidin 770 and evaluation of cytotoxicity. Bioorg Med Chem. 2011 Aug 1;19(15):4421-36. [3]. Powan P, et al. Ecteinascidin 770, a tetrahydroisoquinoline alkaloid, sensitizes human lung cancer cells to anoikis. Anticancer Res. 2013 Feb;33(2):505-12.
实验参考：	
Cell Assay	Ecteinascidin 770 is dissolved in DMSO and diluted with appropriate medium. H23 and H460 cells are seeded into 96-well plates at 1×10^5 cell/mL for 24 h and then treated with different concentrations of ecteinascidin 770 for 24 h. Cells are then incubated with 20 μM of XTT reagent for a further 4 h at 37°C. The intensity of the formazan product is measured at 450 nm using a microplate reader. The cell viability is calculated from the optical density (OD) ratio of treated to non-treated control cells and is presented as a percentage to that of the non-treated controls[3].
References	[1]. Tabunoki H, et al. Molecular network profiling of U373MG human glioblastoma cells following induction of apoptosis by novel marine-derived anti-cancer 1,2,3,4-tetrahydroisoquinoline alkaloids. Cancer Cell Int. 2012 Apr 11;12(1):14. [2]. Saktrakulkla P, et al. Chemistry of ecteinascidins. Part 3: preparation of 2'-N-acyl derivatives of ecteinascidin 770 and evaluation of cytotoxicity. Bioorg Med Chem. 2011 Aug 1;19(15):4421-36. [3]. Powan P, et al. Ecteinascidin 770, a tetrahydroisoquinoline alkaloid, sensitizes human lung cancer cells to anoikis. Anticancer Res. 2013 Feb;33(2):505-12.