Ecteinascidin 770

Cat. No.: HY-101191
CAS No.: 114899-80-8
Molecular Formula: C₄₀H₄₂N₄O₁₀S
Molecular Weight: 770.85
Target: Apoptosis
Pathway: Apoptosis
Storage: -20°C, protect from light
* In solvent: -80°C, 6 months; -20°C, 1 month (protect from light)

**BIOLOGICAL ACTIVITY**

**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.

**IC₅₀ & 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].

**PROTOCOL**

**Cell Assay** [3]
Ecteinascidin 770 is dissolved in DMSO and diluted with appropriate medium. H23 and H460 cells are seeded into 96-well plates at 1×10⁵ 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].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

**REFERENCES**
