

Product Data Sheet

Product Name: STX140
Cat. No.: GC45688

Chemical Properties

Cas. No. 401600-86-0

SMILES COC1=C(OS(N)(=O)=O)C=C(CC[C@]2([H])[C@]3([H])CC[C@@]4(C)[C@@]2([H])CC[C@@H]4OS(N)(=O)=O)C3=C1

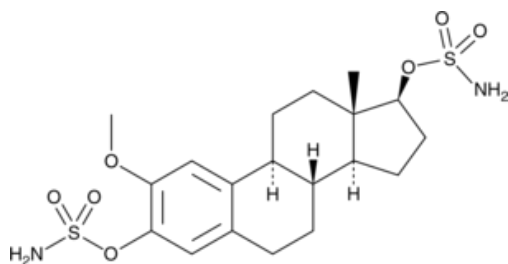
Formula C₁₉H₂₈N₂O₇S₂ M.Wt 460.6

Solubility DMF: 30 mg/ml, DMF:PBS (pH 7.2) Storage Store at -20°C
(1:7): 0.1 mg/ml, DMSO: 25 mg/ml, Ethanol: 14 mg/ml

General For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the tips ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Evaluation sample solution: ship with blue ice All other available size: ship with RT, or Condition blue ice upon request.

Structure



Background

STX140 is an estrogen sulfamate with anticancer activities.¹ It inhibits steroid sulfatase with IC₅₀ values of 39 and 0.5 nM in placental microsomes and MCF-7 cancer cells, respectively. STX140 also binds to carbonic anhydrase IX and II (K_is = 70 and 270 nM, respectively).² It inhibits bovine brain tubulin assembly in a cell-free assay (IC₅₀ = 2.2 μM) and tubule formation in human umbilical vein epithelial cells (HUVECs) when used at concentrations of 50 and 100 nM.^{3,4} STX140 inhibits proliferation of LNCaP, PC3, and MDA-MB-231 cancer cells, as well as wild-type A2780 cancer cells and adriamycin- and cisplatin-resistant A2780 cancer cells (IC₅₀s = 530, 400, 618, 330, 870, and 380 nM, respectively).^{5,6} It reduces angiogenesis in a Matrigel• plug assay in mice and tumor growth in MCF-7 and MDA-MB-231 mouse xenograft models when used at a dose of 20 mg/kg.^{7,6}

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

[1. Raobaikady, B., Purohit, A., Chander, S.K., et al. Inhibition of MCF-7 breast cancer cell proliferation and in vivo steroid sulphatase activity by 2-methoxyoestradiol-bis-sulphamate. J. Steroid Biochem. Mol. Biol. 84(2-3), 351-358 (2003).|2. Andring, J.T., Dohle, W., Tu, C., et al. 3,17 β -Bis-sulfamoyloxy-2-methoxyestra-1,3,5(10)-triene and nonsteroidal sulfamate derivatives inhibit carbonic anhydrase IX: Structure-activity optimization for isoform selectivity. J. Med. Chem. 62(4), 2202-2212 (2019).|3. Jourdan, F., Leese, M.P., Dohle, W., et al. Synthesis, antitubulin, and antiproliferative SAR of analogues of 2-methoxyestradiol-3,17-O,O-bis-sulfamate. J. Med. Chem. 53(7), 2942-2951 (2010).|4. Newman, S.P., Foster, P.A., Ho, Y.T., et al. The therapeutic potential of a series of orally bioavailable anti-angiogenic microtubule disruptors as therapy for hormone-independent prostate and breast cancers. Br. J. Cancer 97(12), 1673-1682 (2007).|5. Day, J.M., Newman, S.P., Comninou, A., et al. The effects of 2-substituted oestrogen sulphamates on the growth of prostate and ovarian cancer cells. J. Steroid Biochem. Mol. Biol. 84(2-3), 317-325 (2003).|6. Foster, P.A., Ho, Y.T., Newman, S.P., et al. 2-MeOE2bisMATE and 2-EtE2bisMATE induce cell cycle arrest and apoptosis in breast cancer xenografts as shown by a novel ex vivo technique. Breast Cancer Res. Treat. 111(2), 251-260 (2008).|7. Chander, S.K., Foster, P.A., Leese, M.P., et al. In vivo inhibition of angiogenesis by sulphamoylated derivatives of 2-methoxyoestradiol. Br. J. Cancer 96(9), 1368-1376 (2007).

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA