

Product Information

Product ID T176503

CAS No. 162635-04-3

Chemical Name Temsirolimus

Synonym CCI-779; NSC 683864; rapamycin, 42-(3-hydroxy-2-(hydroxymethyl)-2-methylpropanoate)

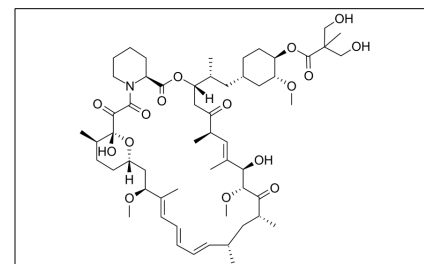
Formula C₅₆H₈₇NO₁₆

Formula Wt. 1030.30

Melting Point

Purity ≥98%

Solubility



Bulk quantities available upon request

Product ID	Size
T176503	5 mg
T176503	25 mg
T176503	100 mg

Store Temp 4°C

Ship Temp Ambient

Description Temsirolimus is an analog of rapamycin found to be active against several cancer types. Like rapamycin, temsirolimus is also an mTOR inhibitor. Temsirolimus has shown activity against brain, rhabdomyosarcoma, multiple myeloma, breast, tuberous sclerosis complex, acute lymphoblastic leukemia, pancreatic, prostate, neuroendocrine, renal cell carcinoma, neuroblastoma, and several other cancer types. When treated with temsirolimus, oral squamous cell carcinoma cell's proliferation and migration were inhibited in vitro and growth of xenografts was suppressed in vivo. Furthermore, in animal models of Parkinson's disease, treatment with temsirolimus led to increased expression of markers including tyrosine hydroxylase and dopamine transporter and also decreased the upregulation of alpha-synuclein in the substantia nigra after MPTP-induced neurotoxicity. Temsirolimus was found to modulate the autophagic process and the neuroinflammatory pathway in Parkinson's disease, demonstrating a neuroprotective effect.

References Georger B, Kerr K, Tang CB, et al. Antitumor activity of the rapamycin analog CCI-779 in human primitive neuroectodermal tumor/medulloblastoma models as single agent and in combination chemotherapy. *Cancer Res.* 2001 Feb 15;61(4):1527-1532. PMID: 11245461.

Gera JF, Mellinghoff IK, Shi Y, et al. AKT activity determines sensitivity to mammalian target of rapamycin (mTOR) inhibitors by regulating cyclin D1 and c-myc expression. *J Biol Chem.* 2004 Jan 23;279(4):2737-2746. PMID: 14576155.

Okui T, Shimo T, Fukazawa T, et al. Antitumor effect of temsirolimus against oral squamous cell carcinoma associated with bone destruction. *Mol Cancer Ther.* 2010 Nov;9(11):2960-2969. PMID: 20858724.

Siracusa R, Paterniti I, Cordaro M, et al. Neuroprotective effects of temsirolimus in animal models of Parkinson's disease. *Mol Neurobiol.* 2018 Mar;55(3):2403-2419. PMID: 28357809.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.