PRODUCT INFORMATION

Fingolimod (hydrochloride)
Item No. 10006292

CAS Registry No.: 162359-56-0
Formal Name: 2-amino-2-[2-(4-octylphenyl)ethyl]-1,3-propanediol, hydrochloride
Synonym: FTY720
MF: C_{19}H_{33}NO_{2} \cdot HCl
FW: 343.9
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Fingolimod (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the fingolimod (hydrochloride) in the solvent of choice. Fingolimod (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of fingolimod (hydrochloride) in these solvents is approximately 20 mg/ml.

Fingolimod (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, fingolimod (hydrochloride) should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Fingolimod (hydrochloride) has a solubility of approximately 0.2 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Fingolimod is a derivative of ISP-1 (myriocin), a fungal metabolite of the Chinese herb I. sinclarii as well as a structural analog of sphingosine. It is a novel immune modulator that prolongs allograft transplant survival in numerous models by inhibiting lymphocyte emigration from lymphoid organs.\(^1\) Fingolimod is phosphorylated by sphingosine kinase, which then acts as a potent agonist at four of the sphingosine-1-phosphate (S1P) receptors (S1P\(_1\), S1P\(_3\), S1P\(_4\), and S1P\(_5\)).\(^2\) Down-regulation of S1P\(_1\) receptors on T and B lymphocytes by fingolimod results in defective egress of these cells from spleen, lymph nodes, and Peyser’s patch.\(^3\) Fingolimod also enhances the activity of the sphingosine transporter Abcb1 and the leukotriene C\(_4\) transporter Abcc1 and inhibits cytosolic phospholipase A\(_2\) activity.\(^4,5\)

References