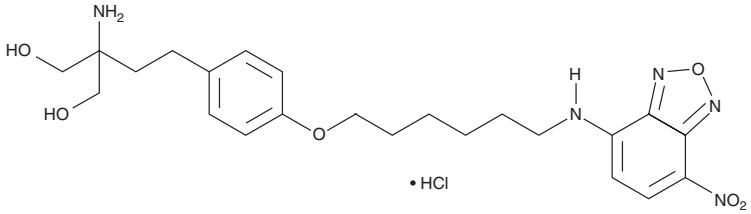
PRODUCT INFORMATION

NBD-FTY720 phenoxy (hydrochloride)

Item No. 16841

CAS Registry No.: 2319882-09-0
Formal Name: 2-amino-2-[2-[4-[[6-[(7-nitro-2,1,3-benzoxadiazol-4-yl)amino]hexyl]oxy]phenyl]ethyl]-1,3-propanediol, monohydrochloride
MF: $C_{23}H_{31}N_5O_6 \bullet HCl$
FW: 510.0
Purity: ≥96%
UV/Vis.: λ_{max}: 269, 335, 468 nm
Supplied as: A solution in methanol:chloroform (1:1)
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

NBD-FTY720 phenoxy (hydrochloride) is supplied as a solution in methanol:chloroform (1:1). To change the solvent, simply evaporate the methanol:chloroform under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of NBD-FTY720 phenoxy (hydrochloride) in ethanol and DMF is approximately 20 mg/ml and approximately 10 mg/ml in DMSO.

NBD-FTY720 phenoxy (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methanol:chloroform solution of NBD-FTY720 phenoxy (hydrochloride) should be diluted with the aqueous buffer of choice. NBD-FTY720 phenoxy (hydrochloride) has a solubility of 0.5 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

FTY720 is an immune modulator that down-regulates sphingosine-1-phosphate (S1P) receptors,[1] enhances the activity of the sphingosine transporter Abcb1 and the leukotriene C_4 transporter Abcc1, and inhibits cytosolic phospholipase A_2 activity.[2,3] It is known that some of the effects of FTY720 require its phosphorylation by sphingosine kinases *in vivo*, with FTY720-phosphate binding to and down-regulating S1P receptors. NBD-FTY720 is a fluorescently-labeled analog of FTY720. The hydroxy methyl side chain of FTY720 that is targeted for phosphorylation by sphingosine kinases is retained in this analog, suggesting that it would likewise be phosphorylated *in vivo*.

References

1. Brinkmann, V., Davis, M.D., Heise, C.E., *et al.* The immune modulator FTY720 targets sphingosine 1-phosphate receptors. *J. Biol. Chem.* **277(24)**, 21453-21457 (2002).
2. Honig, S.M., Fu, S., Mao, X., *et al.* FTY720 stimulates multidrug transporter- and cysteinyl leukotriene-dependent T cell chemotaxis to lymph nodes. *J. Clin. Invest.* **111(5)**, 627-637 (2003).
3. Payne, S.G., Oskeritizian, C.A., Griffiths, R., *et al.* The immunosuppressant drug FTY720 inhibits cytosolic phospholipase A_2 independently of sphingosine-1-phosphate receptors. *Blood* **109(3)**, 1077-1085 (2007).

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