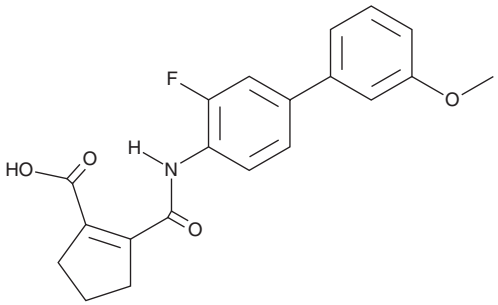
PRODUCT INFORMATION

Vidofludimus

Item No. 18377

CAS Registry No.:	717824-30-1
Formal Name:	2-[[(3-fluoro-3'-methoxy[1,1'-biphenyl]-4-yl)amino]carbonyl]-1-cyclopentene-1-carboxylic acid
Synonym:	4SC-101
MF:	$C_{20}H_{18}FNO_4$
FW:	355.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 261, 293 nm
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

Vidofludimus is supplied as a crystalline solid. A stock solution may be made by dissolving the vidofludimus in the solvent of choice. Vidofludimus is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of vidofludimus in these solvents is approximately 25 mg/ml.

Vidofludimus is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, vidofludimus should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Vidofludimus has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Dihydroorotate dehydrogenase (DHODH) is involved in pyrimidine nucleoside biosynthesis. DHODH inhibitors have value in autoimmune diseases as well as cancer and certain infections.[1] Vidofludimus is an immunosuppressive drug that inhibits DHODH (IC_{50}s = 0.134, 1.29, and 10.6 µM for human, rat, and mouse isoforms, respectively).[2,3] Through this action, it inhibits the proliferation of T cells and B cells and the secretion of IL-17 (IC_{50}s = 12.9, 3.7, and 6.0 µM, respectively, in human cells).[2,3] Oral administration of vidofludimus improves both chronic dextran sodium sulfate-induced and acute TNBS-induced colitis in mice.[2]

References

1. Munier-Lehmann, H., Vidalain, P.O., Tangy, F., *et al.* On dihydroorotate dehydrogenases and their inhibitors and uses. *J. Med. Chem.* **56(8)**, 3148-3167 (2013).
2. Fitzpatrick, L.R., Deml, L., Hoffmann, C., *et al.* 4SC-101, a novel immunosuppressive drug, inhibits IL-17 and attenuates colitis in two murine models of inflammatory bowel disease. *Inflamm. Bowel Dis.* **16(10)**, 1763-1777 (2010).
3. Fitzpatrick, L.R. Novel pharmacological approaches for inflammatory bowel disease: Targeting key intracellular pathways and the IL-23/IL-17 axis. *Int. J. Inflam.* **2012:389404**, (2016).

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