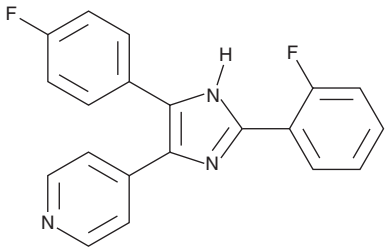
PRODUCT INFORMATION

TA-02

Item No. 24668

CAS Registry No.:	1784751-19-4
Formal Name:	4-[2-(2-fluorophenyl)-4-(4-fluorophenyl)-1H-imidazol-5-yl]-pyridine
MF:	$C_{20}H_{13}F_2N_3$
FW:	333.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 203, 298 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

TA-02 is supplied as a crystalline solid. A stock solution may be made by dissolving the TA-02 in the solvent of choice, which should be purged with an inert gas. TA-02 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of TA-02 in these solvents is approximately 3 and 5 mg/ml, respectively.

TA-02 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, TA-02 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. TA-02 has a solubility of approximately 0.14 mg/ml in a 1:6 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

TA-02 is a derivative of the p38 MAPK inhibitor SB 203580 (Item Nos. 13067 | 13344) and an inducer of cardiomyocyte differentiation.[1] It is cardiomyogenic, increasing expression of the cardiomyocyte marker NKX2-5 by greater than 2-fold and decreasing expression of mesoderm markers and the pre-cardiac marker Isl-1 in HES-3 NKX2-5$^{eGFP/w}$ cells when applied after embryoid body formation at a concentration of 5 µM. TA-02 inhibits casein kinase 1ε (CK1ε) and CK1D and reduces expression of Wnt/β-catenin signaling pathway members, activities that positively correlate with its cardiomyogenic activity.

Reference

1. Laco, F., Low, J.-L., Seow, J., *et al.* Cardiomyocyte differentiation of pluripotent stem cells with SB203580 analogues correlates with Wnt pathway CK1 inhibition independent of p38 MAPK signaling. *J. Mol. Cell. Cardiol.* **80**, 56-70 (2015).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM