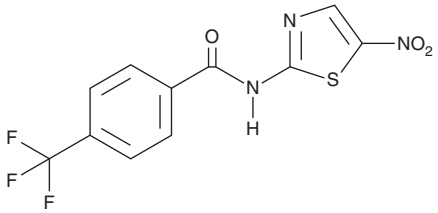
PRODUCT INFORMATION

CAY10784

Item No. 34020

CAS Registry No.:	1245814-52-1
Formal Name:	N-(5-nitro-2-thiazolyl)-4-(trifluoromethyl)-benzamide
MF:	$C_{11}H_6F_3N_3O_3S$
FW:	317.2
Purity:	≥98%
UV/Vis.:	λ_{max}: 232, 342 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

CAY10784 is supplied as a crystalline solid. A stock solution may be made by dissolving the CAY10784 in the solvent of choice, which should be purged with an inert gas. CAY10784 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of CAY10784 in these solvents is approximately 1, 10, and 30 mg/ml, respectively.

CAY10784 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, CAY10784 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. CAY10784 has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

CAY10784 is a STAT3 inhibitor (IC_{50} = 0.74 µM in a reporter assay) and a derivative of WP1066 (Item No. 14736).[1] It inhibits proliferation of HeLa, Caco-2, A549, A375, U87MG, and HL-60 cancer cells (IC_{50}s = 1.8, 1.8, 3, 2.8, 2.3, and 1.2 µM, respectively) but not PC3 or HT-29 cancer cells (IC_{50}s = >10 µM for both). CAY10784 is also active against *H. pylori* and *C. jejuni* (MICs = 1.6 and 4.7 µM, respectively).[2]

References

1. Lü, Z., Li, X., Li, K., *et al.* Structure–activity study of nitazoxanide derivatives as novel STAT3 pathway inhibitors. *ACS Med. Chem. Lett.* (2021).
2. Ballard, T.E., Wang, X., Olekhnovich, I., *et al.* Synthesis and antimicrobial evaluation of nitazoxanide-based analogues: Identification of selective and broad spectrum activity. *ChemMedChem* **6(2)**, 362-377 (2011).

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