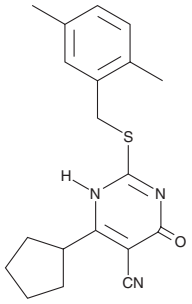
PRODUCT INFORMATION

HJC0197

Item No. 19092

CAS Registry No.:	1383539-73-8
Formal Name:	4-cyclopentyl-2-[[(2,5-dimethylphenyl) methyl]thio]-1,6-dihydro-6-oxo-5-pyrimidinecarbonitrile
MF:	$C_{19}H_{21}N_3OS$
FW:	339.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 203, 312 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

HJC0197 is supplied as a crystalline solid. A stock solution may be made by dissolving the HJC0197 in the solvent of choice. HJC0197 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of HJC0197 in these solvents is approximately 5 and 10 mg/ml, respectively.

HJC0197 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, HJC0197 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. HJC0197 has a solubility of approximately 0.2 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

Exchange protein activated by cAMP (Epac) proteins mediate cAMP signaling independent of protein kinase A (PKA). HJC0197 is a cell-permeable inhibitor of Epac1 and Epac2 (IC_{50} = 5.9 µM for Epac2).[1] It inhibits Epac1-mediated Rap1-GDP exchange activity at 25 µM, but has no effect on cAMP-induced type I and II PKA activity at this concentration.[1] Pretreatment of HEK293 cells expressing either Epac1 or Epac2 with 10 µM HJC0197 completely blocks Epac-mediated phosphorylation of Akt.[1] HJC0197 has been used to study the role of Epac signaling in chondrogenesis in chicken micromass cultures.[2]

References

1. Chen, H., Tsalkova, T., Mei, F.C., *et al.* 5-Cyano-6-oxo-1,6-dihydro-pyrimidines as potent antagonists targeting exchange proteins directly activated by cAMP. *Bioorg. Med. Chem. Lett.* **22(12)**, 4038-4043 (2012).
2. Juhįsz, T., Matta, C., Somogyi, C., *et al.* Mechanical loading stimulates chondrogenesis *via* the PKA/CREB-Sox9 and PP2A pathways in chicken micromass cultures. *Cell Signal.* **26**, 468-482 (2014).

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