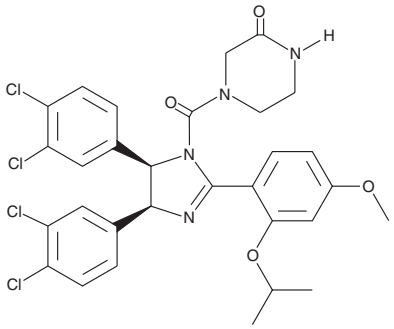
PRODUCT INFORMATION

Caylin-1

Item No. 10004985

CAS Registry No.: 1207480-88-3
Formal Name: 4-[4,5-*bis*(3,4-chlorophenyl)-2-(2-isopropoxy-4-methoxy-phenyl)-4,5-dihydro-imidazole-1-carboxyl]-piperazin-2-one
MF: $C_{30}H_{28}Cl_4N_4O_4$
FW: 650.4
Purity: ≥98%
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

Caylin-1 is supplied as a crystalline solid. A stock solution may be made by dissolving the caylin-1 in the solvent of choice, which should be purged with an inert gas. Caylin-1 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of caylin-1 in these solvents is at least 30 mg/ml.

Caylin-1 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, caylin-1 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Caylin-1 has a solubility of 0.25 mg/ml in a 1:3 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Nutlin-3 is an activator of p53 that functions by inhibiting the interaction of p53 with MDM2, a negative regulator of p53 activity.[1] Caylin-1 is a nutlin-3 analog which contains chlorine substituents at the 3 and 4 positions on two of the phenyl rings rather than a single 4-chloro as seen in nutlin-3. At high concentrations, caylin-1 inhibits the growth of HCT116 cells with an IC_{50} value of approximately 7 µM, making it about 7-fold less potent than nutlin-3 in the same assay. Interestingly, at concentrations at or below 1 µM, caylin-1 promotes the growth of HCT116 cells approximately 20% compared to untreated cells.[2] The mechanism of the growth promoting properties of caylin-1 have not yet been elucidated.

References

1. Vassilev, L.T., Vu, B.T., Graves, B., *et al. In vivo* activation of the p53 pathway by small-molecule antagonists of MDM2. *Science* **303**, 844-848 (2004).
2. Meade, E. [Unpublished] (2004).

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