

Product Information



Caylin-1

Item No. 10004985

Formal Name: 4-[4,5-bis(3,4-chlorophenyl)-2-(2-isopropoxy-4-methoxy-phenyl)-4,5-dihydro-imidazole-1-carboxyl]-piperazin-2-one

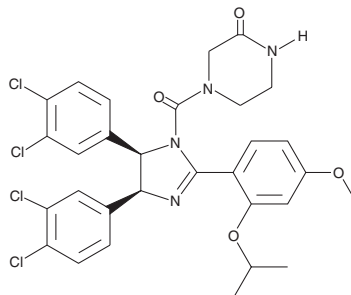
MF: C₃₀H₂₈Cl₄N₄O₄

FW: 650.4

Purity: ≥98%

Stability: ≥2 years at -20°C

Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that caylin-1 be stored as supplied at -20°C. It should be stable for at least two years.

Caylin-1 is supplied as a crystalline solid. A stock solution may be made by dissolving the caylin-1 in an organic solvent 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.

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 HCT-116 cells with an IC₅₀ 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 HCT-116 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 Meade, E. [Unpublished] (2004).

Related Products

p53 (human recombinant) - Item No. 10357 • PRIMA-1 - Item No. 63520 • Hepsin Polyclonal Antibody - Affinity-Purified (aa 241-260) - Item No. 100022 • β-Catenin Polyclonal Antibody - Item No. 100029 • Nutlin-3 - Item No. 10004372 • Caylin-2 - Item No. 10005002

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

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